SONY

User Guide

Personal Computer
VGC-LV100 Series

VAIO

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Before Use

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the on-screen User Guide. Sony has combined leading-edge technology in audio, video, computing, and communications to provide state-of-the-art personal computing experience.

!
External views illustrated in this manual may look slightly different from those of your computer.

Documentation

Your documentation includes printed information and user guides to read on your VAIO computer.

Printed Documentation

- **Welcome mat** — Contains an overview of components connection, set-up information, etc.
- **Safety Information** — Contains safety guidelines and owner information.

Non-printed Documentation

- **User Guide** (this manual) — Explains features of your computer. It also includes information about the software programs included with your computer, as well as information on solving common problems.

  ✍
  To go to web sites described in this manual by clicking their respective URLs beginning with http://, your computer must be connected to the Internet.

- **Specifications** — The online specifications describe the hardware and software configurations of your VAIO computer.

  To view the online specifications:

  1. Connect to the Internet.
  2. Go to the Sony online support web site at the following URLs:
     http://esupport.sony.com/EN/VAIO/ for customers in USA
     http://www.sony.ca/support/ for customers in Canada
     http://esupport.sony.com/ES/VAIO/ for customers in Spanish-speaking Latin American countries or areas
     http://esupport.sony.com/ES/VAIO/BR/ for customers in Brazil

- **VAIO Recovery Center User Guide** — Provides information about restoring individual software programs, hardware drivers, and drive partition(s) or your entire hard disk drive to the original factory settings.

  To access this on-screen guide:

  1. Click **Start** and **Help and Support**.
  2. Click **Use My VAIO**.
  3. Click **VAIO Recovery Center User Guide**.

- **SmartWi™ Connection Utility Help** — Provides information about setting up Bluetooth*, wireless LAN, and wireless WAN* functions.

  To access this on-screen guide:

  1. Click **Start**, **All Programs**, and **SmartWi Connection Utility**.
  2. Click **SmartWi Connection Utility Help**.

  * The Bluetooth and wireless WAN functions are available on selected models only. See the online specifications to find out whether your model supports the functions.

- **Media Center User Guide** (Selected models only) — Provides information about using **Windows Media Center**.

  To access this on-screen guide:

  1. Click **Start** and **Help and Support**.
  2. Click **Use My VAIO**.
  3. Click **Media Center User Guide**.

Help and Support

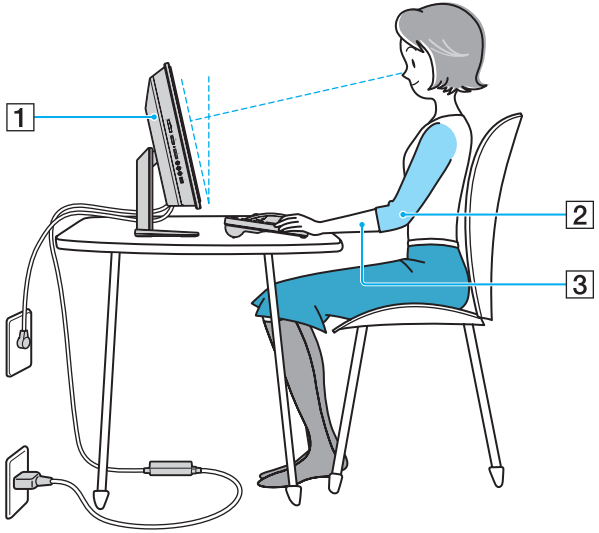
Help and Support is easy to access and provides a single location for general information and technical assistance for your VAIO computer. Choose from the following categories to find the answers you need.

To access **Help and Support**, click **Start** and **Help and Support**.

- **Get started with my VAIO**
  Get help with Internet and wireless setup, security setup, personalizing your VAIO computer, and creating recovery DVDs and more.
- **Use my VAIO**
  Access your VAIO user guide, interactive help in the form of VAIO tutorials, how-to articles, the VAIO technology page, specifications, and system and software information.
- **Troubleshoot my VAIO**
  Maintain and troubleshoot your VAIO computer with VAIO Care, system restore, backup and recovery, and contact Sony support.

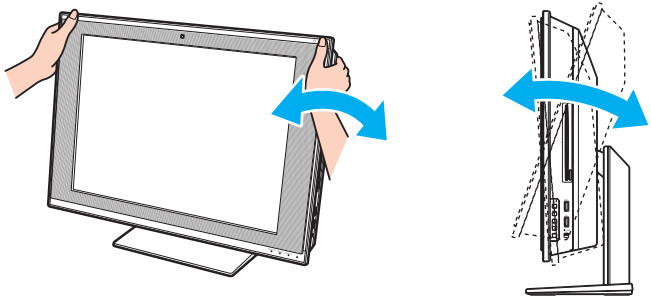
Ergonomic Considerations

Whenever possible, you should attempt to take account of the following ergonomic considerations:



- **Position of your computer** – Place the display directly in front of you (1). Keep your forearms horizontal (2), with your wrists in a neutral, comfortable position (3) while using the keyboard, pointing device, or external mouse. Let your upper arms hang naturally at your sides. Take frequent breaks while using your computer. Excessive use of the computer may strain eyes, muscles, or tendons.
- **Furniture and posture** – Sit in a chair with good back support. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable. Sit in a relaxed, upright posture and avoid slouching forward or leaning far backwards.

- **Viewing angle of the display** – Use the display's tilting feature to find the best position. You can reduce eye strain and muscle fatigue by adjusting the tilt of the display to the proper position. Adjust the brightness level of the display as well.



!
While adjusting the viewing angle, do not exert excessive pressure on your computer, especially on the center of the speaker grill, to eliminate a risk of mechanical damage.

- **Lighting** – Choose a location where windows and lights do not cause glare and reflection on the display. Use indirect lighting to avoid bright spots on the display. Proper lighting adds to your comfort and work efficiency.
- **Ventilation** – Make sure you leave at least 4 inches (10 cm) of space behind and at least 8 inches (20 cm) of space on each side of the main unit.

Getting Started

This section describes how to get started using your VAIO computer.

!
Before starting your computer for the first time, do not connect any other hardware that did not originally come with your computer. Be sure to start up your computer with only the supplied accessories connected and set up your system. Upon completion, connect one device (for example, a printer, an external hard disk drive, a scanner, and so on) at a time, following the manufacturers' instructions.

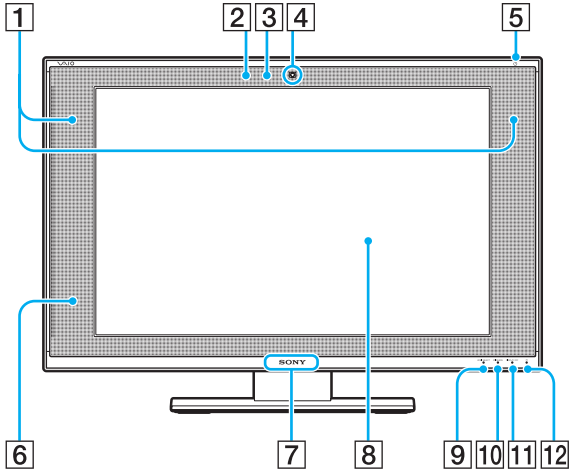
- **Locating Controls and Ports** (page 12)
- **About the Indicator Lights** (page 17)
- **Setting Up Your Computer** (page 18)
- **Shutting Down Your Computer Safely** (page 33)

Locating Controls and Ports

Take a moment to identify the controls and ports shown on the following pages.

!
The appearance of your computer may be different from those illustrated in this manual due to variations in specifications. It may also vary in some countries or areas.

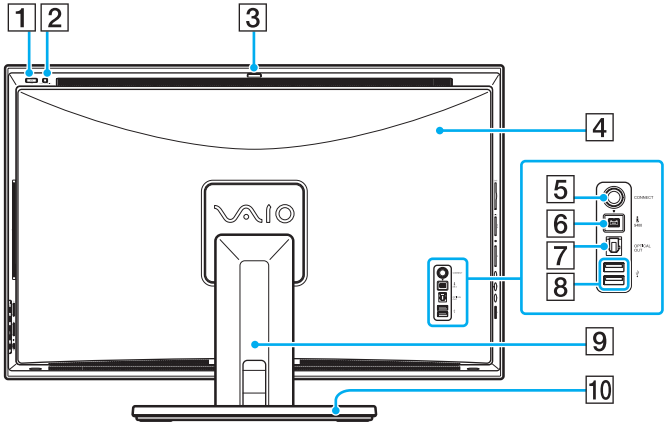
Front



1 Built-in speakers (stereo)
2 Built-in microphone (monaural)
3 Built-in **MOTION EYE** camera indicator (page 17)
4 Built-in **MOTION EYE** camera (page 43)
5 Power indicator (page 17)
6 Remote sensor
Point the supplied remote commander to this sensor for operations.
7 **SONY** logo lamp (page 120)
8 LCD screen (page 139)
9 **HDMI SELECT** indicator* (page 17)
10 **WIRELESS** indicator (page 17)
11 **DISPLAY OFF** indicator (page 17)
12 Hard disk drive/Optical disc drive indicator (page 17)

* On selected models only.

Back



1 Power button

2 **DISPLAY OFF** button
Press this button to turn off the LCD backlight. While the HDMI input is selected (page 76), pressing this button also turns off the volume.

3 Capture angle adjuster (page 43)

4 Back panel cover
Remove the back panel cover to access the ports and jacks behind it (page 18).

5 **CONNECT** button (page 26), (page 28)

6 i.LINK 4-pin (S400) port (page 110)

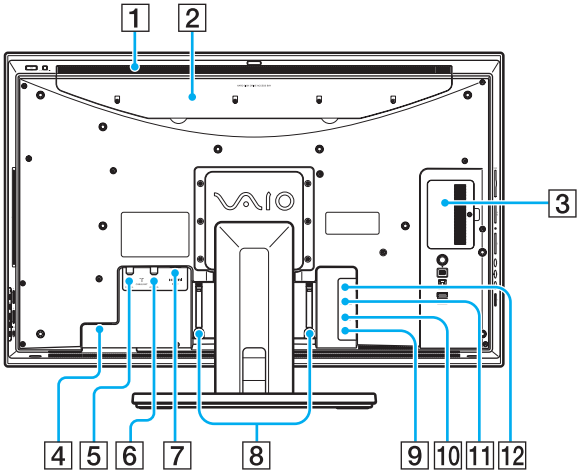
7 **OPTICAL OUT** port (page 105)
(Output Sampling Rate: 44.1 KHz/48.0 KHz/96.0 KHz)

8 Hi-Speed USB (USB 2.0) ports* (page 107)

9 Base stand cover
Remove the base stand cover to bundle cables to keep them tidy (page 18).

10 Base stand (page 143)

* Support high-/full-/low- speeds.

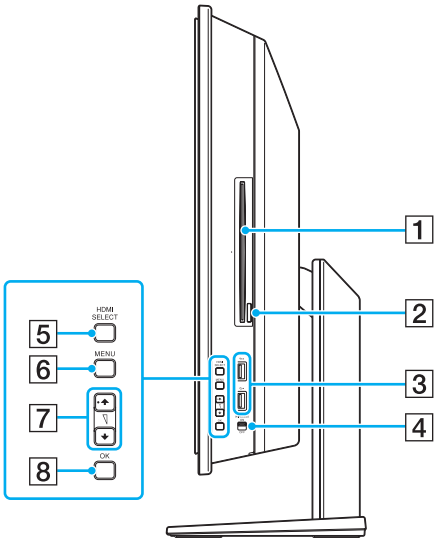


1 Air exhaust vent (page 142)
2 **HARD DISK DRIVE ACCESS BAY** cover (page 133)
3 Memory module compartment cover (page 127)
4 AC In port (page 23)
5 **CABLE/ANT DIGITAL** input port* (page 63)
6 **CABLE/ANT ANALOG** input port* (page 56)
7 **HDMI INPUT** port* (page 75)
8 Cable clamps (page 25)
9 **INFRARED TRANSMITTER OUT** jack* (page 73)
10 **S VIDEO** input port* (page 64)
11 **A/V INPUT** jack* (page 64)
12 Network (Ethernet) port (page 112)

* On selected models only.

!
The area around the air exhaust vent (1) becomes hot while your computer is on. Be sure to wait until the computer cools down before you touch it.

Right

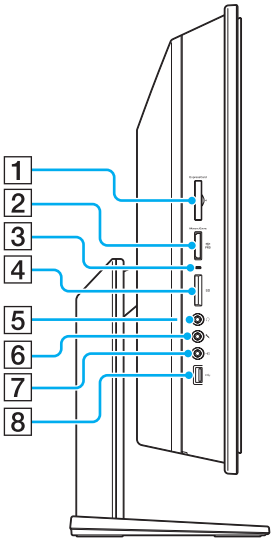


1 Optical disc drive (page 47)
2 Drive eject button (page 48)
3 Hi-Speed USB (USB 2.0) ports*1 (page 107)
4 **WIRELESS** switch (page 96)
5 **HDMI SELECT** button*2 (page 76)
6 **MENU** button*2 (page 76)
7 Up/Down buttons*2 (page 76)
8 **OK** button*2 (page 76)

*1 Support high-/full-/low- speeds.

*2 On selected models only.

Left



1 **ExpressCard**/34 slot (page 82)
2 Memory Stick slot*1 (page 86)
3 Media Access indicator (page 17)
4 **SD** memory card slot (page 92)
5 Headphones jack (page 105)
6 Microphone jack
Connect an external microphone.
7 Line In jack
Connect an external audio device for audio input.
8 Hi-Speed USB (USB 2.0) port*2 (page 107)

*1 Your computer supports both standard- and Duo-size Memory Stick.

*2 Supports high-/full-/low- speeds.

About the Indicator Lights

Your computer is equipped with the following indicator lights:

Indicator	Functions
Power ⏻	Illuminates in green when the computer is on, illuminates in orange while the computer is in Sleep mode, and turns off when the computer is off.
Built-in **MOTION EYE** camera	Illuminates while the built-in **MOTION EYE** camera is in use.
Media Access	Illuminates when data is read from or written to a memory card. (Do not place the computer into Sleep mode or turn it off when this indicator is lit.) When the indicator is unlit, the memory card is not in use.
HDMI SELECT*	Illuminates in green while the HDMI input is selected.
DISPLAY OFF	Illuminates in orange when the LCD backlight is turned off.
Hard disk drive/Optical disc drive	Illuminates when the drive is reading or writing data. Do not place the computer into Sleep mode or turn it off when this indicator is lit.
WIRELESS	Illuminates when the **WIRELESS** switch is turned on.

* On selected models only.

Setting Up Your Computer

Removing and Replacing the Covers

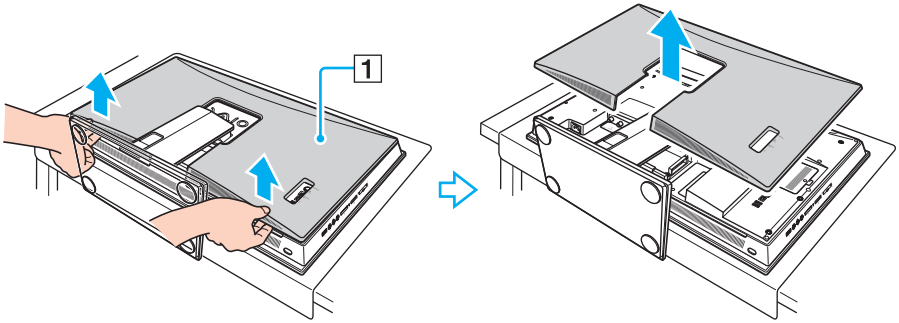
Before accessing some ports and jacks on the back of your computer, you first need to remove the back panel cover from the computer and the base stand cover from the base stand.

To remove the back panel cover and the base stand cover

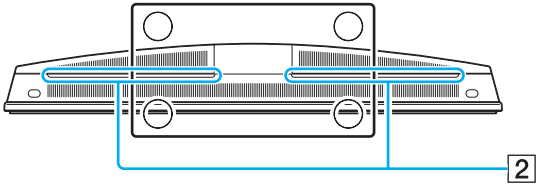
1 Gently face down your computer on a flat surface.

!
When facing down your computer, be sure to place it on a soft cloth to avoid damage to the LCD screen.

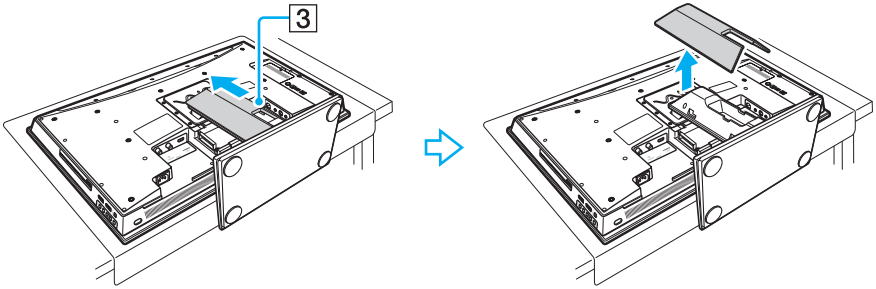
2 Grasp the back panel cover (1) with both hands, gently lift it, and remove it from the computer.



!
Put your fingertips underneath the back panel cover (2) when removing the cover from the computer.

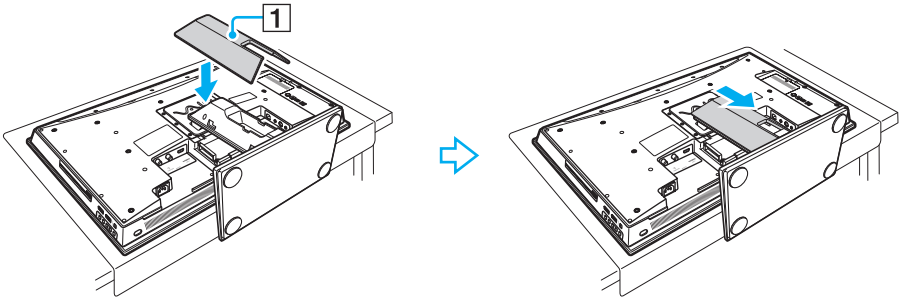


3 Slide the base stand cover (3) in the direction of the arrow and remove it from the base stand.

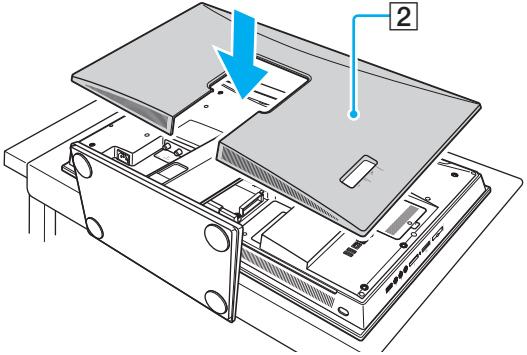


To replace the back panel cover and the base stand cover

1 Put the base stand cover (1) back on the base stand and slide it in the direction of the arrow.



2 Put the back panel cover (2) so as to fit the projections inside the cover into the respective holes on the back of the computer and push in the cover toward the computer.



!
Keep the back panel cover and the stand cover on the computer unless access to the back panel is necessary.

Connecting a Power Source and Cables

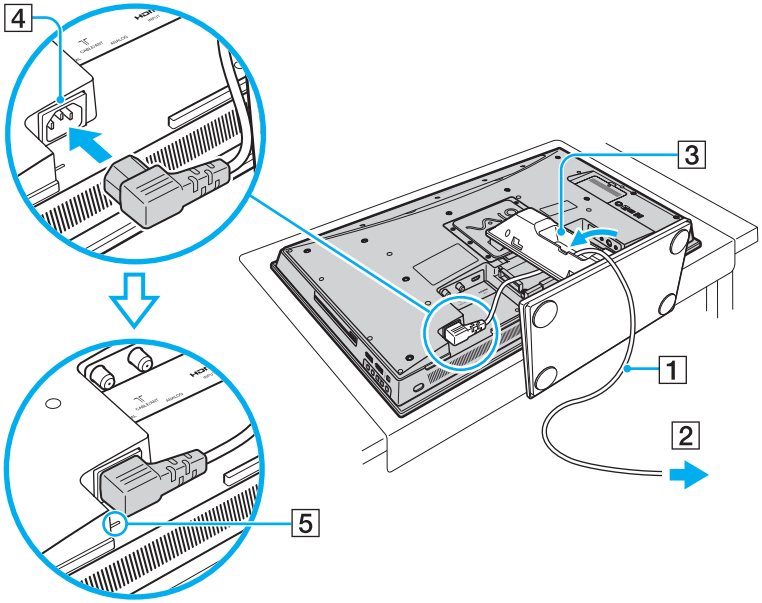
You need a power cord to connect your computer to an AC power source and it must be plugged into the power source before you can establish communication with your wireless keyboard and mouse. In addition, you need to connect other cables if you want to use some functions of your computer, such as the TV function.

✍
Use only the supplied power cord for your computer.

To connect the power cord and other cables

1 Remove the back panel cover and the base stand cover from the computer.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

2 Plug one end of the power cord (1) into the AC outlet (2), put the other end through the hole (3) in the base stand, and plug it into the AC In port (4) on the computer as illustrated below.

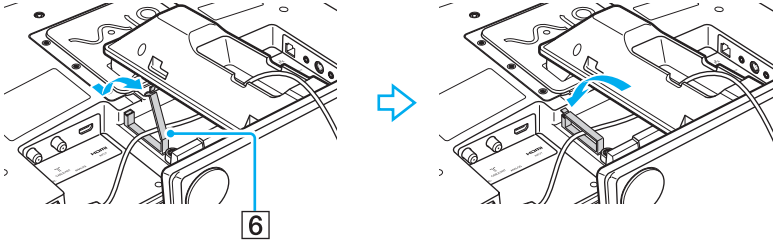


!
Be sure to push the plug into the AC In port all the way to the guide (5).

3 Connect other cables to the computer, if necessary.

- ❑ To set up TV connections available on models with the TV tuner board, see **Setting Up TV Connections** **(page 57)**.
- ❑ To connect an HDMI cable to the **HDMI INPUT** port for using the HDMI Input function, see **Using the HDMI Input Function** **(page 75)**.
- ❑ To connect your computer to an Ethernet network, see **Connecting to a Network (LAN)** **(page 112)**.

4 Snap open the cable clamp (6), route the cables through it, and then snap the cable clamp back shut.



5 Replace the stand cover and the back panel cover.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

To disconnect your computer completely from AC power, unplug the power cord when the computer is off.

Make sure that the AC outlets are easily accessible.

If you unplug the power cord from your computer while the computer is on or in Sleep mode, you may lose all unsaved data.

Connecting the Wireless Keyboard

A wireless keyboard and four AA alkaline batteries for use in the keyboard are supplied with your computer. Before attempting to use the wireless keyboard, you must install the batteries and establish communication between the computer and the keyboard.

If you find your keyboard not working, for example after replacement of the keyboard batteries, try the following steps for reconnection.

To connect the wireless keyboard

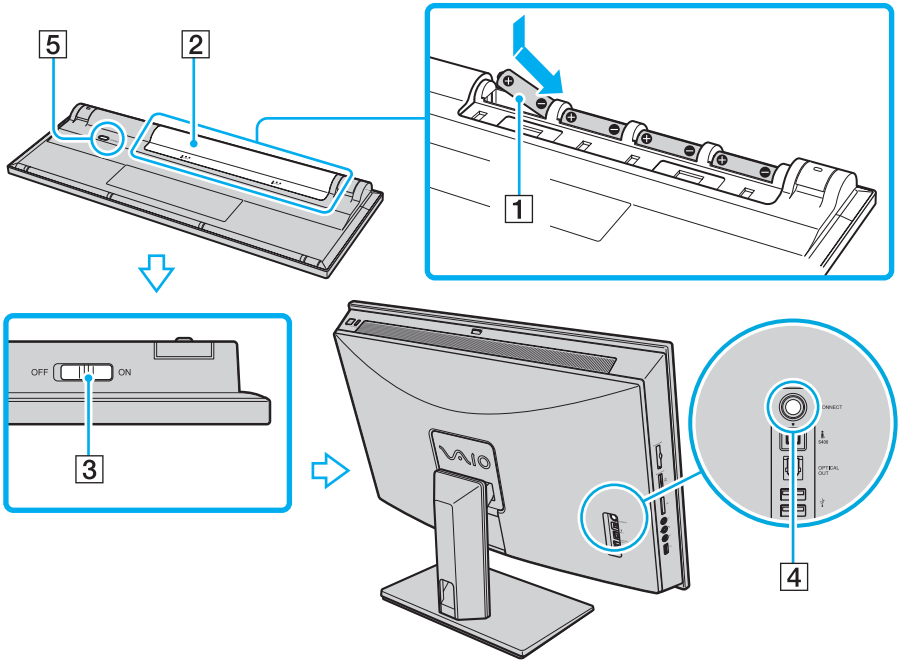
To connect the wireless keyboard, it must be located within a range of approximately 11.8 inches (30 cm) to approximately 39.4 inches (1 m) from the computer.

1. Insert the supplied four AA batteries (1) into the battery compartment (2) on the bottom of the wireless keyboard.
2. Turn on the computer.
3. Slide the power switch (3) on the back of the keyboard to the **ON** position.
4. Press the **CONNECT** button (4) on the back of the computer.
5. Press the **CONNECT** button (5) on the bottom of the keyboard.

   The connect indicator ᛉ turns on in the LCD window on the keyboard when connection is established between the computer and the keyboard. If not, repeat the procedure.

Steps 4 and 5 must be completed within 10 seconds of each other.

If the wireless keyboard is left unused for 20 minutes or longer, the connect indicator ᛉ will turn off. This could indicate that the connection between your computer and the keyboard is lost. Press the **Fn** key to check that the connect indicator turns on before using the keyboard.



You can check the battery indicator (or) in the LCD window on the wireless keyboard for its battery power level.

If the wireless keyboard does not operate properly, the batteries may need to be replaced. If you do not intend to use the wireless keyboard for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

If you want to put the wireless keyboard in a more 'ergonomic' position, flip open the keyboard feet.

Connecting the Wireless Mouse

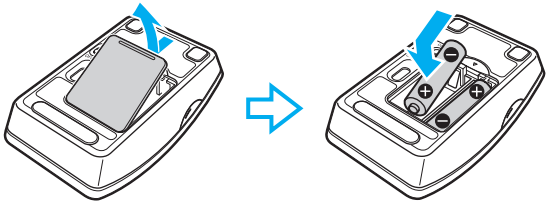
A wireless mouse and two AA alkaline batteries for use in the mouse are supplied with your computer. Before attempting to use the wireless mouse, you must install the batteries and establish communication between your computer and the mouse.

If you find your mouse not working, for example after replacement of the mouse batteries, try the following steps for reconnection.

To connect the wireless mouse

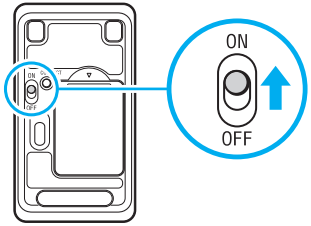
To connect the wireless mouse, it must be located within a range of approximately 11.8 inches (30 cm) to approximately 39.4 inches (1 m) from the computer.

1 Insert the supplied two AA batteries into the wireless mouse as shown below:

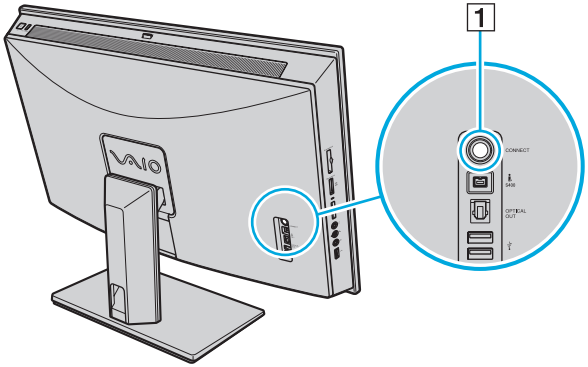


2 Turn on the computer.

3 Slide the power switch on the bottom of the mouse to the **ON** position.



4 Press the **CONNECT** button (1) on the back of the computer.



5 Press the **CONNECT** button on the bottom of the mouse within 10 seconds from step 4.
Communication between the mouse and the computer should now be established.

If the wireless mouse does not operate properly, the batteries may need to be replaced. If you do not intend to use the wireless mouse for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

Preparing for Wall Mounting

Your computer is equipped with four holes on its back panel, which look similar to those compliant with the Video Electronics Standards Association (VESA) mounting standard, for connecting to your mounting system.

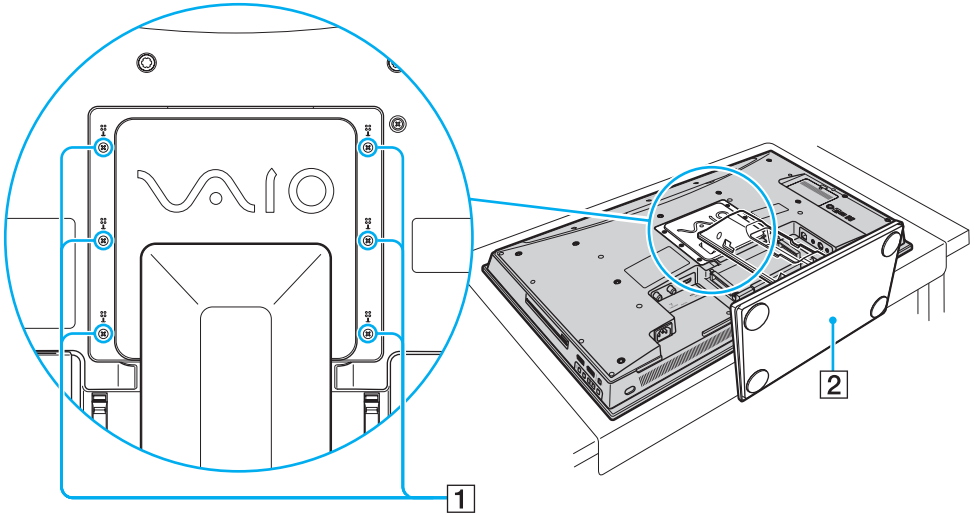
!
Be sure to establish wireless communication between your computer and the wireless mouse and keyboard before mounting the computer on the wall.

It is recommended that you allow adequate clearance between the wall and the back of your computer when mounting the computer on the wall so that you can access the ports and buttons on the back of the computer.

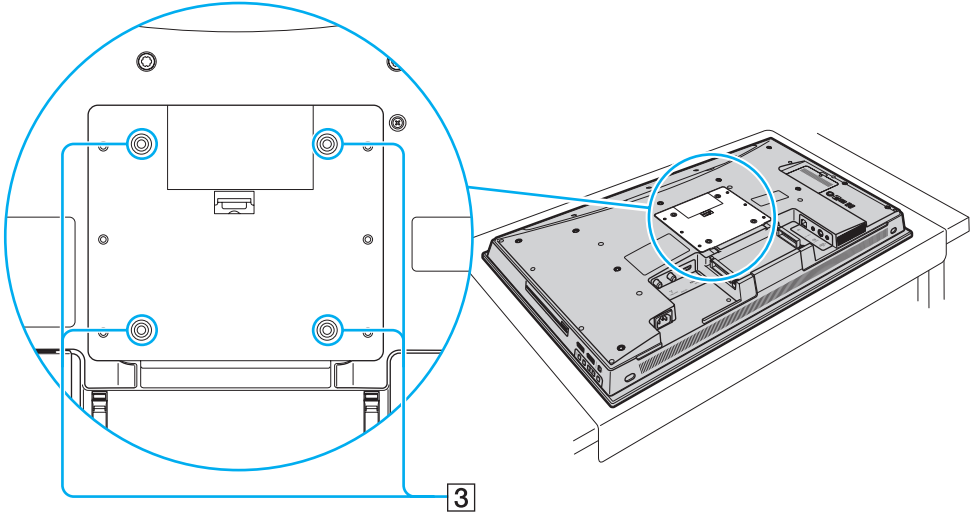
To reveal the mounting holes

1 Remove the back panel cover from the computer.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

2 Unscrew the six screws (1) and remove the base stand (2).



3 Use the four holes (3) for mounting by following the instructions described in the manual that came with your mounting system.



Shutting Down Your Computer Safely

To avoid losing unsaved data, be sure to shut down your computer properly, as described below.

To shut down your computer

1. Turn off any peripherals connected to the computer.
2. Click **Start**, the arrow next to the **Lock** button, and then **Shut Down**.
3. Respond to any prompts warning you to save documents or to consider other users and wait for the computer to turn off automatically.
   The power indicator light turns off.

Using Your VAIO Computer

This section describes how to get the most out of using your VAIO computer.

❑ **Using the Keyboard (page 35)**
❑ **Using the Touch Pad (page 39)**
❑ **Using the Mouse (page 40)**
❑ **Using the Built-in MOTION EYE Camera (page 43)**
❑ **Using the Optical Disc Drive (page 47)**
❑ **Using the TV Function (page 56)**
❑ **Using the HDMI Input Function (page 75)**
❑ **Using the ExpressCard Module (page 82)**
❑ **Using the Memory Stick (page 86)**
❑ **Using the SD Memory Card (page 92)**
❑ **Using the Internet (page 95)**
❑ **Using Wireless LAN (WLAN) (page 96)**
❑ **Using the Bluetooth Function (page 99)**

Using the Keyboard

A wireless keyboard is supplied with your computer.

The wireless keyboard uses a standard key arrangement with additional keys that perform specific functions.

Using the Wireless Keyboard

!
To maintain good communication, operate the wireless keyboard within the distance limitations of keyboard: approximately 32.8 feet (10 m) from your computer.

Confirm that the supplied AA batteries are properly installed.

Press the **CONNECT** button located on the back of your computer first, and then press the **CONNECT** button on the bottom of the wireless keyboard.

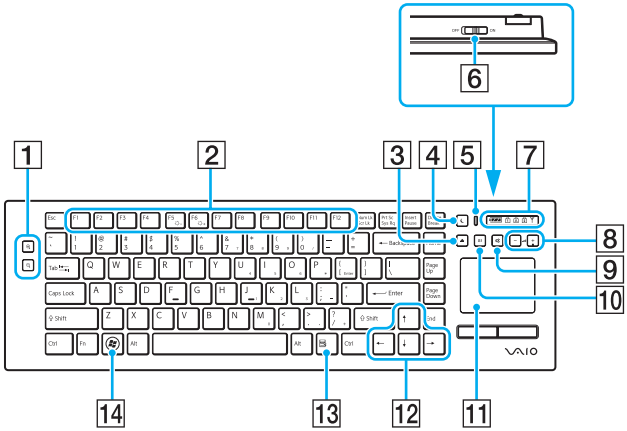
If you find your keyboard not working after replacement of the keyboard batteries, reconnect the keyboard. See **Connecting the Wireless Keyboard (page 26)** for the detailed procedure.

Avoid using any wireless devices that exchange radio signals on the 2.4 GHz frequency band near the wireless keyboard. These devices may cause interference, causing the keyboard to stop working properly.

Do not place metal furniture or objects near your computer or wireless keyboard, as this may create interference, causing the keyboard to stop working properly.

Do not mix old (used) and new batteries when replacing batteries in the wireless keyboard. Always use the same type and manufacture of battery.

Do not mix alkaline with manganese batteries. Using incompatible batteries or mixing used, new or different types of batteries can damage the wireless keyboard.



Illustrated above is the English keyboard as an example.

1 Zoom buttons
Change the view size of your screen.

Press to make the screen view look smaller and further away (zoom out).

Press to make the screen view look bigger and closer (zoom in).
See the help file included with the **VAIO Control Center** for more information.

2 Function keys
Perform certain tasks. The task associated with each function key varies among software applications except the following combinations with the **Fn** key.
Fn+**F5**: Decreases lighting intensity of the LCD screen.
Fn+**F6**: Increases lighting intensity of the LCD screen.

3 Disc drive eject button
Ejects the optical disc from the drive.

4 Sleep button
Provides for the lower level of power consumption.
For details on power management, see **Using the Power Saving Mode** **(page 121)**.

5 Power indicator
A green bar appears when the power switch is turned on.

6 Power switch
Slide the switch to turn the wireless keyboard on and off.

7 Indicators

(Battery): turns on while the AA batteries for the wireless keyboard are sufficient and switches to when the batteries wear out.

(Num lock): Turns on while in the Num Lock state.

(Caps lock): Turns on while in the Caps Lock state.

(Scroll lock): Turns on while in the Scroll Lock state.

(Connect): Turns on while connection between the computer and the wireless keyboard is in place to indicate that the keyboard is ready for use (page 26).

8 Volume control buttons
Increase (+) or decrease (-) the volume.

9 Muting button
Turns the volume on and off.

10 **S1** button
Opens the **Media Center Start** menu by default.

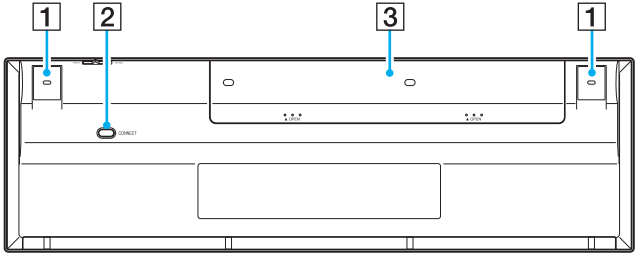
The default **S1** button assignment may be different from the above. In such a case, you can change the assignment with the **VAIO Control Center**. See **Setting Up Your Computer with VAIO Control Center (page 120)** and find out more in its help file.

11 Touch pad
See **Using the Touch Pad (page 39)** for more information.

12 Directional arrow keys
Move the pointer on the computer screen.

13 Applications key
Displays a shortcut menu in certain software applications.

14 Windows key
Displays the **Start** menu.



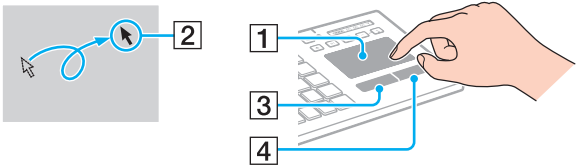
1 Keyboard feet
Flip open to adjust the keyboard angle.

2 **CONNECT** button (page 26)
Press to enable the wireless keyboard to communicate with the computer.

3 Battery compartment
Storage compartment for the AA batteries.

Using the Touch Pad

You can point to, select, drag, and scroll objects on the screen using the touch pad.



Action	Description
Point	Slide your finger on the touch pad (1) to place the pointer (2) on an item or object.
Click	Press the left button (3) once.
Double-click	Press the left button twice.
Right-click	Press the right button (4) once. In many applications, this action displays a shortcut menu.
Drag	Slide your finger on the touch pad while pressing the left button.
Scroll	Slide your finger along the right edge of the touch pad to scroll vertically. Slide your finger along the bottom edge to scroll horizontally (the scroll function is available only with applications that support a touch pad scroll feature).

✍
You can disable/enable the touch pad with the **Fn+F11** keys while a mouse is connected to your computer. To change other touch pad settings, click **Start**, **All Programs**, **VAIO Control Center**, **Keyboard and Mouse** and **Pointing Device**.

You can disable/enable the Motion Pointer feature with the **Fn+F1** keys that keeps moving the pointer or scrolling when your fingertip reached an edge of the touch pad.

If pointer movement or scrolling continues against your intention, your fingertip may have reached an edge of the touch pad. In such a case, take your finger off the touch pad. It is recommended that you put your finger on the touch pad around its center to start an operation.

Using the Mouse

A wireless mouse is supplied with your computer.

Using the Wireless Mouse

The wireless optical mouse has no cables to plug in and uses a light-emitting diode (LED) instead of a ball.

!
To maintain good communication, operate the wireless mouse within the distance limitations of mouse: approximately 32.8 feet (10 m) from your computer.

Confirm that the supplied AA batteries are properly installed.

Press the **CONNECT** button located on the back of your computer first, and then press the **CONNECT** button on the bottom of the wireless mouse.

If you find your mouse not working after replacement of the mouse batteries, reconnect the mouse. See **Connecting the Wireless Mouse** **(page 28)** for the detailed procedure.

Avoid using any wireless devices that exchange radio signals on the 2.4 GHz frequency band near the wireless mouse. These devices may cause interference, causing the mouse to stop working properly.

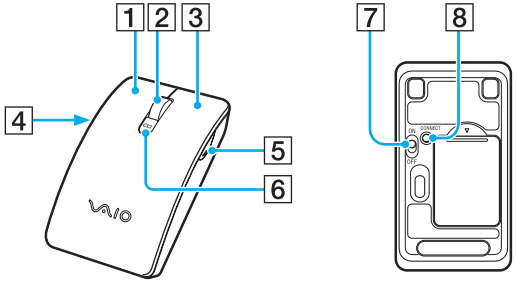
Use surfaces such as plain paper, card stock, or fabric that have minimal repetitive patterns.

Avoid surfaces such as mirrors, smooth glass, or magazines that have half- tone printing.

Do not place metal furniture near your computer or wireless mouse, as this may create interference, causing the mouse to stop working properly.

Do not mix old (used) and new batteries when replacing batteries in the wireless mouse. Always use the same type and manufacture of battery.

Do not mix alkaline with manganese batteries. Using incompatible batteries or mixing used, new or different types of batteries can damage the wireless mouse.



1 Left button
Click or double-click the left button to select items. To drag and drop items, hold the left button down while sliding the mouse, then release the button to drop the item.

2 Central wheel
Rotate the central wheel to scroll up or down a page. Press the wheel once to lock the scroll action and control the movement by moving the entire mouse (the scroll function is available only with applications that support it).

3 Right button
Press the right button once to display a context-sensitive shortcut menu (if any).

4 Left side button
Press the left side button to go back to the previous page. Pressing it works in the same way as pressing the back button on the **Internet Explorer**. To change the button assignment, press and hold the central wheel.

5 Right side button
Press the right side button to go forward to the page you viewed before. Pressing it works in the same way as pressing the forward button on the **Internet Explorer**. To change the button assignment, press and hold the central wheel.

6 Battery indicator
Blinks when the mouse batteries are running out of power.

7 Power switch
Slide the switch to turn the mouse on and off.

8 **CONNECT** button (page 28)
Press to enable communication between the computer and the wireless mouse.

Adjusting the Mouse Functions

1 Click **Start** and **Control Panel**.

2 Click **Mouse** under **Hardware and Sound**.
The **Mouse Properties** window appears.

3 Change the settings.

Using the Built-in MOTION EYE Camera

Your computer is equipped with a built-in **MOTION EYE** camera.

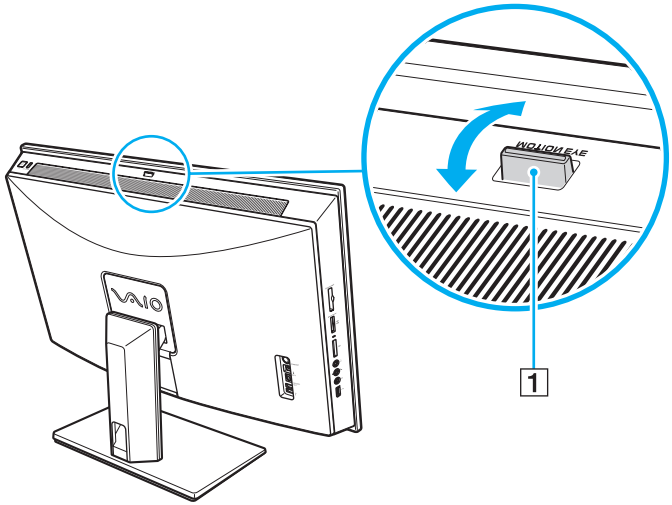
The built-in **MOTION EYE** camera adds video functionality to instant messaging software and video editing software and enables you to capture still images and movies with the preinstalled image capture software.

Turning on the computer activates the built-in **MOTION EYE** camera. Video conference is possible with the appropriate software.

Note that launching or exiting your instant messaging or video editing software does not activate or deactivate the built-in **MOTION EYE** camera, respectively.

The built-in **MOTION EYE** camera cannot be shared by more than one software application. If another software application is using the camera, exit the application before using the built-in **MOTION EYE** camera with your desired application.

You can change the capture angle of the built-in **MOTION EYE** camera with the capture angle adjuster (1) on the back of your computer. Push down or up the horizontal bar to adjust the angle upward or downward, respectively, until you see the live feed in the desired angle.



!
The viewer window may show some noise, for example horizontal streaks, if you view a rapid-moving object. This is normal and does not indicate a malfunction.

You cannot operate the built-in **MOTION EYE** camera with the **Microsoft Windows Movie Maker** software.

Capturing Still Images

To capture a still image

1. Click **Start**, **All Programs**, **ArcSoft WebCam Companion 2**, and **WebCam Companion 2** to launch the **WebCam Companion 2**.
2. Click the **Capture** icon in the main window.
3. Frame your subject in the viewfinder.
4. Click the **Capture** button below the displayed image.
   The current image in the viewfinder is captured and its thumbnail image is added as a the thumbnail in the left pane of the main window.

✍
When capturing an image in a dark place, click the **WebCam Settings** icon after step 2 and select the low light or low light compensation option in the properties window.

The **WebCam Companion 2** provides many more features. See the help file included with the software for more information.

Capturing Movies

To capture a movie

1. Click **Start**, **All Programs**, **ArcSoft WebCam Companion 2**, and **WebCam Companion 2** to launch the **WebCam Companion 2**.
2. Click the **Record** icon in the main window.
3. Frame your subject in the viewfinder.
4. Click the **Record Video** button below the displayed image to start movie recording.
5. When finished, click the **Record Video** button once again to stop movie recording.
   The first scene of the captured movie is added as a thumbnail in the left pane of the main window.

When capturing a movie in a dark place, click the **WebCam Settings** icon after step 2 and select the low light or low light compensation option in the properties window.

The **WebCam Companion 2** provides many more features. See the help file included with the software for more information.

Using the Optical Disc Drive

Your computer is equipped with an optical disc drive.

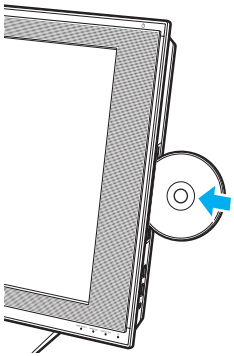
To insert a disc

!
Be sure to attach the 8 cm disc adapter to an 8 cm disc before inserting the disc into the optical disc drive slot.

Slide the disc straight into the slot so as not to apply excessive pressure to the disc or slot.

1 Turn on the computer.

2 With the label side facing toward you, slide a disc into the optical disc drive slot.



If you plan to use an external optical disc drive, connect the drive before you launch any preinstalled disc operation program.

To remove a disc

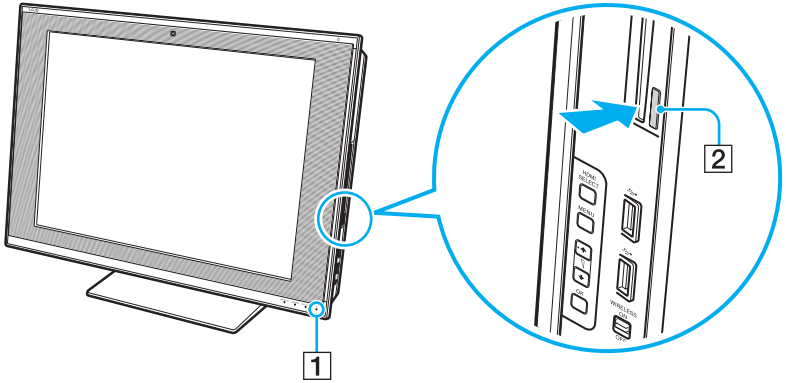
!
The drive eject button is disabled when your computer is turned off.

Do not remove the optical disc when your computer is in Sleep mode. Doing so may cause the computer to malfunction.

Be sure not to pull out the optical disc forcefully before it completely slides out.

1 Check that the Hard disk/Optical disc drive indicator light (1) is unlit.

2 Press the drive eject button (2) or the disc drive eject button on the wireless keyboard.
The optical disc slides out.



Alternatively, you can remove a disc with some mouse operations.
To do so, click **Start** and **Computer**, right-click the optical disc drive icon, and select **Eject**.

If pressing either button does not slide the disc out of the drive, restart your computer and repeat the procedure.

Reading and Writing Optical Discs

Your computer plays and records CDs, DVDs, and Blu-ray Disc™ media, depending on the model you purchased. Check your specifications for the type of optical disc drive installed on your model.

Use the table below to see which types of media your optical disc drive supports.

PR: playable and recordable
P: playable but not recordable
–: not playable or recordable

	CD-ROM	Video CD	Music CD	CD Extra	CD-R/RW	DVD-ROM	DVD-Video	BD-ROM	DVD-R/RW	DVD+R/RW	DVD+R DL	DVD-R DL	DVD-RAM	BD-R*9/RE*10
DVD±RW/±R DL/RAM	P	P	P	P	PR	P	P	–	PR*1 *2	PR	PR*5	PR*6	PR*3 *4	–
Blu-ray Disc Combo	P	P	P	P	PR*8	P	P	P	PR*1 *2	PR	PR*5	PR*6	PR*3 *4	P*11 *12
Blu-ray Disc	P	P	P	P	PR*8	P	P	P	PR*1 *2	PR	PR*5	PR*6	PR*3 *4	PR*7 *11 *12

*1 Supports writing data to DVD-R discs compliant with DVD-R for General Version 2.0/2.1.

*2 Supports writing data to DVD-RW discs compliant with DVD-RW Version 1.1/1.2.

*3 The DVD±RW/RAM disc drive on your computer does not support the DVD-RAM cartridge. Use non-cartridge discs or discs with a removable cartridge.

*4 Writing data to single-sided DVD-RAM discs (2.6 GB) compliant with DVD-RAM Version 1.0 is not supported.
DVD-RAM Version 2.2/12X-SPEED DVD-RAM Revision 5.0 disc is not supported.

*5 Writing data to DVD+R DL (Double Layer) discs is available only on discs supporting DVD+R DL (Double Layer) recording.

*6 Writing data to DVD-R DL (Dual Layer) discs is available only on discs supporting DVD-R DL (Dual Layer) recording.

*7 Supports writing data to BD-R Version 1.1 discs (single-layer discs with the capacity of 25 GB, dual-layer discs with the capacity of 50 GB) and BD-RE Version 2.1 discs (single-layer discs with the capacity of 25 GB, dual-layer discs with the capacity of 50 GB).

*8 Writing data to Ultra Speed CD-RW discs is not supported on the models with certain types of the Blu-ray Disc drive.

*9 BD-R stands for Blu-ray Disc-Recordable in Version 1.1 format.

*10 BD-RE stands for Blu-ray Disc-Rewritable in Version 2.1 format.

*11 The Blu-ray Disc drive on your computer does not support BD-RE Disc media in Version 1.0 format and Blu-ray Disc media with a cartridge.

*12 BD-R LTH TYPE media is not supported on the models with certain types of the Blu-ray Disk drive.

!
This product is designed to play back discs that conform to the Compact Disc Digital Audio standard specifications (CD Standard). A DualDisc is a two sided disc product with a DVD recorded layer on one side and a digital audio layer on the other side. Be aware that the audio side (non-DVD side) of a DualDisc may not play on this product because it does not conform to the CD Standard.

When you buy pre-recorded or blank discs for use with your VAIO computer, be sure to read the notices on the disc package carefully to check both playback and recording compatibility with your computer's optical disc drives. Sony does NOT guarantee the compatibility of VAIO optical disc drives with discs that are not compliant with the official "CD," "DVD," or "Blu-ray Disc" standard. USING NON-COMPLIANT DISCS CAN CAUSE FATAL DAMAGE TO YOUR VAIO PC OR CREATE SOFTWARE CONFLICTS AND CAUSE SYSTEM HANGING.
For inquiries about disc formats, contact the individual publisher of the pre-recorded disc or the manufacturer of the recordable disc.

✍
8 cm disc writing is not supported.

Except the Blu-ray Disc drive, installed on selected models only, all other optical disc drives are capable of reading 8 cm discs with the supplied 8 cm disc adapter.

With the supplied 8 cm disc adapter, the Blu-ray Disc drive, installed on selected models only, is capable of reading 8 cm DVD-R, DVD-RW, DVD+RW, and DVD+R DL discs, but not 8 cm CD-ROM, DVD-RAM discs, and Blu-ray Disc media.

!
To play copyright protected Blu-ray Disc media continuously, you need to update the AACS key. Note that the AACS key update requires Internet access.

As with other optical media devices, circumstances may limit compatibility or prevent Blu-ray Disc media playback. VAIO computers may not support movie playback on packaged media recorded in AVC or VC1 format at high bit rates.

Region settings are required for some contents on DVDs and BD-ROM Disc media. If the region setting on the optical disc drive does not match the region coding on the disc, playback is not possible.

Some contents may restrict video output to standard definition or prohibit analog video output. It is strongly recommended that a digital HDCP-compliant environment be implemented for optimum compatibility and viewing quality.

Notes on writing data to a disc

- Only use circular discs. Do not use discs in any other shape (star, heart, card, etc.), as this may damage the optical disc drive.
- Do not strike or shake your computer while the optical disc drive is writing data to a disc.
- Do not use memory-resident utility software while the optical disc drive is writing data to a disc. This may cause your computer to malfunction.
- Do not plug or unplug the power cord while the optical disc drive is writing data to a disc.

Notes on playing discs

To achieve optimum performance when playing discs, you should follow these recommendations.

- Some CD players and computer optical disc drives may not be able to play audio CDs created with the CD-R or CD-RW media.
- Some DVD players and computer optical disc drives may not be able to play DVDs created with the DVD+R DL, DVD-R DL, DVD+R, DVD+RW, DVD-R, DVD-RW, or DVD-RAM media.
- Do not place your computer into the power saving mode while your computer is playing a disc.
- Region code indicators are labeled on the discs or packages to indicate in which region and on what type of player you can play the disc. If the region code indicates "all," you can play this disc in most regions of the world. If the region code for your residence area is different from the label, you cannot play the disc on your computer.

Playing CDs

To play an audio CD

1 Insert a disc into the optical disc drive.

2 If nothing appears on the desktop, click **Start**, **All Programs**, and the desired CD software to play the CD.

If the **Audio CD** window appears, click to select an option.

Copying Files to CDs

To copy files to a disc

1 Insert a disc into the optical disc drive.
If the **AutoPlay** window appears, click **Burn files to disc** and follow the on-screen instructions until the empty disc folder appears.

2 Open the folder that contains the file(s) you want to copy and drag them to the empty disc folder.

3 Close the disc folder.

Playing DVDs

To play a DVD

1 Close all running software applications.

2 Insert a DVD into the optical disc drive.

3 If nothing appears on the desktop, click **Start**, **All Programs**, and the desired DVD software to play the DVD.

For instructions on how to use the software, see the help file included with your DVD software.

Copying Files to DVDs

To copy files to a disc

1 Close all running software applications.

2 Insert a disc into the optical disc drive.

3 If nothing appears on the desktop, click **Start**, **All Programs**, and the desired DVD burning software to copy files to the disc.

For instructions on how to use the software, see the help file included with your DVD burning software.

Playing Blu-ray Disc Media

! The Blu-ray Disc playback function is available on selected models only. See the online specifications to find out the type of your optical disc drive, and then **Reading and Writing Optical Discs** (page 49) to find out about the supported disc media.

To play a Blu-ray Disc media

1 Close all running software applications.

2 Insert a Blu-ray Disc media into the optical disc drive.

3 If nothing appears on the desktop, click **Start**, **All Programs**, and the desired Blu-ray Disc software to play the disc.

For instructions on how to use the software, see the help file included with your software.

Copying Files to Blu-ray Disc Media

! The Blu-ray Disc writing function is available on selected models only. See the online specifications to find out the type of your optical disc drive, and then **Reading and Writing Optical Discs** (page 49) to find out about the supported disc media.

To copy files to a Blu-ray Disc media

1 Close all running software applications.

2 Insert a Blu-ray Disc media into the optical disc drive.

3 If nothing appears on the desktop, click **Start**, **All Programs**, and the desired Blu-ray Disc burning software to copy files to the disc.

For instructions on how to use the software, see the help file included with your Blu-ray Disc burning software.

Using the TV Function

To enhance your audio and visual experience in conjunction with the **Windows Media Center**, your computer may have some TV tuner boards installed: one analog tuner board and one ATSC tuner board, or one analog tuner board only. See the online specifications to find out about your TV tuner board configuration.

The **Windows Media Center** provides you with a wide range of TV, DVD, and video viewing, as well as music recording and playback. This section describes how to set up your TV, set-top box, and other equipment. See the on-screen **Media Center User Guide** for more information on the **Windows Media Center** features.

To access this on-screen guide

1. Click **Start** and **Help and Support**.
2. Click **Use My VAIO**.
3. Click **Media Center User Guide**.

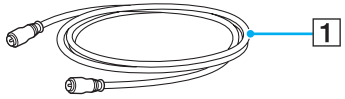
Setting Up TV Connections

! The following connections may not be available in some countries or areas.

The best method to connect your computer system, TV monitor or display, and cable service access, depends on the type of cable connection available in your home.

TV signal reception strength will vary widely depending on service availability in your area as well as the type of connection available.

One primary cable to connect the computer to a cable service access or a TV antenna is the TV coaxial cable (1). One end connects to the computer's **CABLE/ANT ANALOG** input port, and the other end connects to the cable service access or to the antenna. Note that only one TV coaxial cable is supplied with models with the TV tuner board.



✍ You need to remove the back panel cover from the computer and the base stand cover from the base stand before setting up the TV connection. See **Removing and Replacing the Covers** **(page 18)** for the procedure. For information on how to connect cables to the computer, see **Connecting a Power Source and Cables** **(page 23)**.

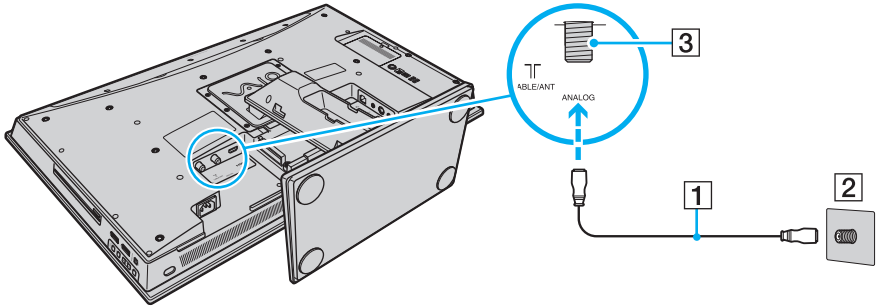
Connecting to standard cable access (CATV)

!
The appearance of your computer and the location of the ports may be different from those illustrated in this manual due to variations in specifications. It may also vary in some countries or areas.

To connect in CATV mode (Option 1)

1 Connect one end of the TV coaxial cable (1) (supplied) to your cable service access (wall outlet) (2).

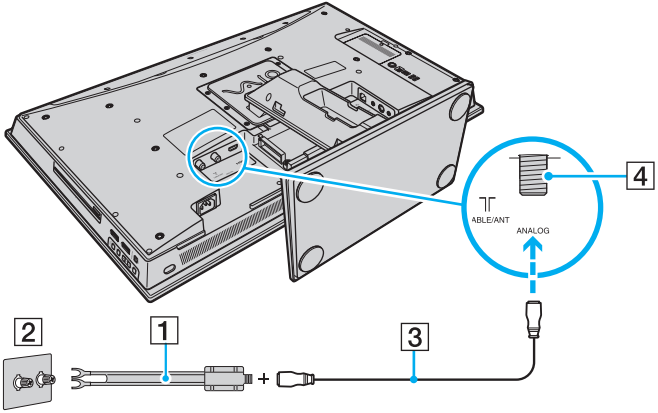
2 Connect the other end to the **CABLE/ANT ANALOG** input port (3) on the computer.



To connect in CATV mode (Option 2)

1 Connect the two metal hooks on a 75-ohm/300-ohm RCA transformer cable (1) (not supplied) to the screw-type grips at your cable service access (wall outlet) (2).

2 Connect one end of the TV coaxial cable (3) (supplied) to the transformer end of the RCA transformer cable (1). Connect the other end to the **CABLE/ANT ANALOG** input port (4) on the computer.



Connecting to a standard antenna

You can connect your computer to an indoor/outdoor antenna system, using Option 1 or Option 2 from the previous section, **Connecting to standard cable access (CATV)** **(page 58)**. Depending on the type of antenna system in your home, your connection may require a VHF/UHF RF combiner/transformer (not supplied) to connect the computer and the indoor/outdoor antenna system.

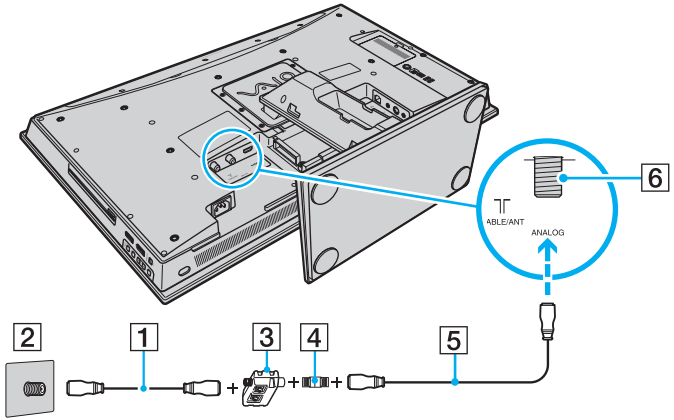
✍
If you are connecting to an indoor/outdoor antenna, you may need to reorient the antenna for best reception. Move the antenna cable away from other power sources or connectors to reduce signal interference.

To connect in land-based (terrestrial) broadcasting mode (Option 1)

1 Connect one end of a TV coaxial cable (1) (supplied) to your antenna outlet (2). Connect the other end to a VHF/UHF RF combiner/transformer (3) (not supplied).

2 Connect a coaxial cable feed connector (4) (not supplied) to the VHF/UHF RF combiner/transformer (3).

3 Connect one end of another TV coaxial cable (5) (not supplied) to the feed connector (4). Connect the other end to the **CABLE/ANT ANALOG** input port (6) on the computer.

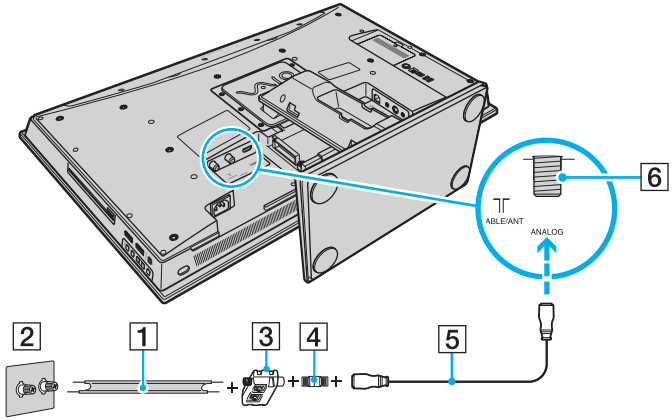


To connect in land-based (terrestrial) broadcasting mode (Option 2)

1 Connect one end of a 300-ohm twin lead cable (1) (not supplied) to the screw-type grips at your antenna outlet (2). Connect the other end to the grips on a VHF/UHF RF combiner/transformer (3) (not supplied).

2 Connect a coaxial cable feed connector (4) (not supplied) to the VHF/UHF RF combiner/transformer (3).

3 Connect one end of the TV coaxial cable (5) (supplied) to the feed connector (4). Connect the other end to the **CABLE/ANT ANALOG** input port (6) on the computer.

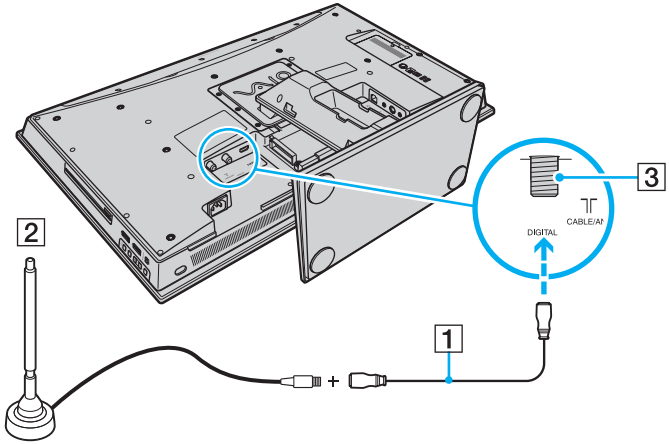


To connect to an antenna (air) for digital television system (ATSC signal standard)

If you have an antenna for receiving the over-the-air signals transmitted by a digital TV broadcasting system, you can connect it to receive these signals for digital televisions, for example high definition TVs.

1 Connect one end of the TV coaxial cable (1) (supplied) to an ATSC antenna (not supplied) (2).

2 Connect the other end to the **CABLE/ANT DIGITAL** input port (3) on the computer.



Connecting with a cable or satellite set-top box (STB)

You can connect your computer to cable service access that uses a set-top box (cable or satellite). When using the set-top box (STB) setup, you can change channels only through the STB, using its controls or the supplied remote commander.

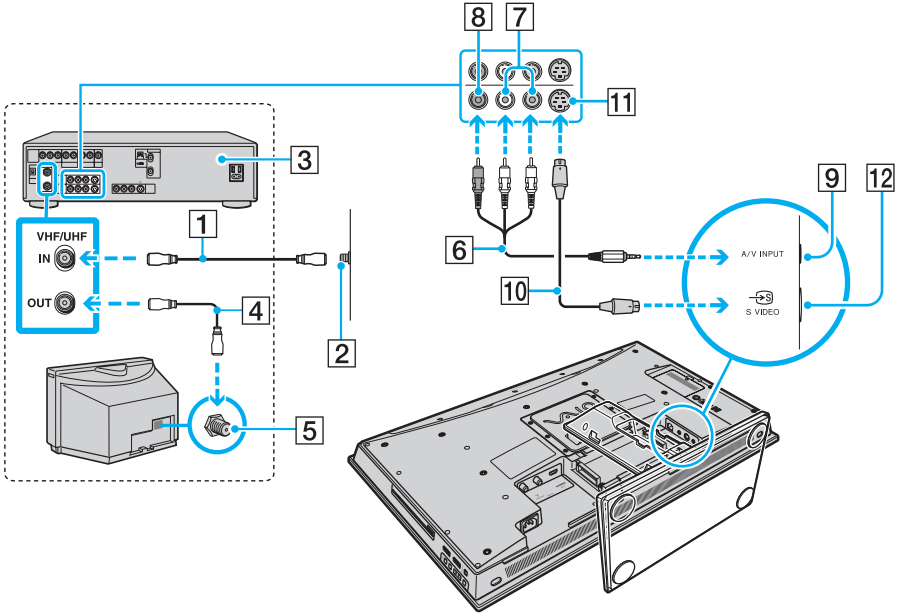
When using the STB setup:

- A standard TV remote control cannot be used to change TV channels. You can use your TV remote control to set the TV to the channel-out number (channel 3, 4, etc.) or direct video input specified by your cable or satellite service provider.
- You may be able to use a universal remote control or commander to change TV channels, if the device is capable of controlling the STB.

To connect in STB mode (Option 1)

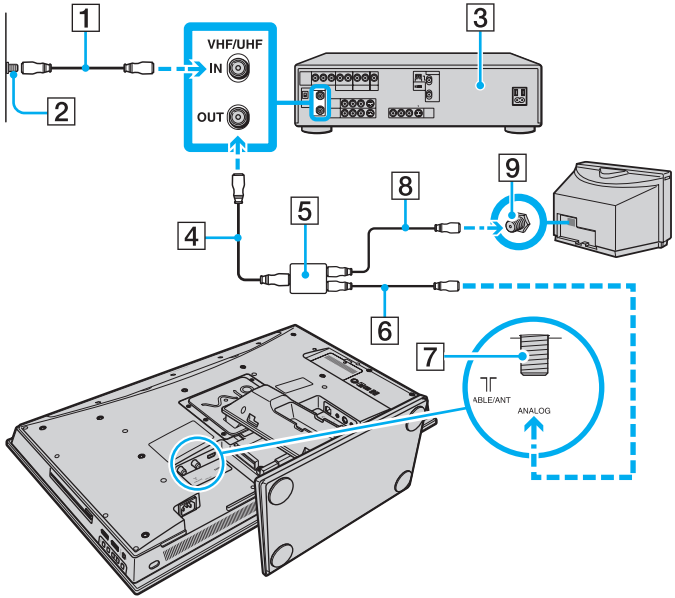
! When you connect your computer to a set-top box, use a stereo A/V cable with triple RCA plugs on one end and the straight plug on the other end. You cannot use a stereo A/V cable with the L-shaped plug.

1. Connect one end of a TV coaxial cable (1) (supplied) to your cable service access (wall outlet) (2). Connect the other end to the VHF/UHF input port on the back panel of your set-top box (STB) (3).
2. Connect a second TV coaxial cable (4) (not supplied) to the VHF/UHF output port on the set-top box (STB) (3). Connect the other end to the VHF/UHF input port (5) on your TV monitor or display.
3. Connect one end of a stereo A/V cable with triple RCA plugs (6) (not supplied) to the Composite Audio output (L/R) jacks (7) and the Video output jack (8) on the back panel of your set-top box (STB) (3), matching the plug and jack colors. Connect the other end to the **A/V INPUT** jack (9) on the computer.
4. If you prefer better video quality, connect one end of an S Video cable (10) (not supplied) to the S Video output port (11) on the back panel of the set-top box (STB) (3). Connect the other end to the **S VIDEO** input port (12) on the computer.


8
7
11
3
1
VHF/UHF
IN
OUT
4
2
5
6
10
9
12
A/V INPUT
S VIDEO

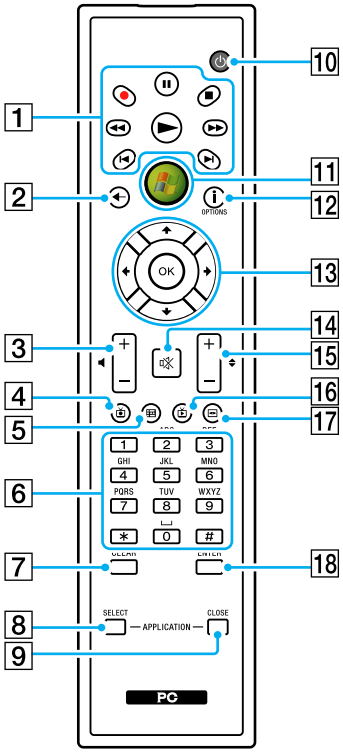
To connect in STB mode (Option 2)

1. Connect one end of a TV coaxial cable (1) (supplied) to your cable service access (wall outlet) (2). Connect the other end to the VHF/UHF input port on the back panel of your set-top box (STB) (3).
2. Connect a second TV coaxial cable (4) (not supplied) to the VHF/UHF output port on the set-top box (STB) (3). Connect the other end to the single-connection end of a splitter device (5) (not supplied).
3. Connect a third TV coaxial cable (6) (not supplied) to the double-connection end of the splitter device (5). Connect the other end to the **CABLE/ANT ANALOG** input port (7) on the computer.
4. Connect a fourth TV coaxial cable (8) (not supplied) to the double-connection end of the splitter device (5). Connect the other end to the VHF/UHF input port (9) on your TV monitor or display.


1
2
VHF/UHF
IN
OUT
3
4
5
6
7
8
9
ABLE/ANT
ANALOG

Using the Remote Commander

If your computer supports the TV function, then a remote commander is supplied with the computer for using a wide variety of AV related software applications, including Media Center.



Illustrated above is the English remote commander as an example.

1 Pause ❚❚ button
Press to pause media playback. Press again to resume playback.
Stop ■ button
Press to stop media playback or TV recording session.
Forward ►► button
Press to fast-forward media at three speeds.
Skip ►❙ button
Press to move media forward, for example, one audio track, one DVD chapter, and 30 seconds of recorded TV or video.
Replay ❙◄ button
Press to move media backward, for example, one audio track, one DVD chapter, and 7 seconds of TV or video.
Rewind ◄◄ button
Press to move media backward at three speeds.
Record ● button
Press to begin recording.
Play ► button
Press to begin media playback.

2 Back button
Press to return to the previous window.

3 Volume control buttons
Press to increase (+) or decrease (-) the volume.

4 Recorded TV button
Press to view previously recorded TV programs.

5 Guide button
Press to view the TV program guide for your area.

6 Alphanumeric buttons
Press to select specific channels or enter text. (Press **ENTER** or **OK** to activate the channel selection.)

7 **CLEAR** button
Press to backspace and delete entered text.

8 **APPLICATION SELECT** button
Press to switch among open applications. This button works the same as the **Alt**+**Tab** keys.

9 **APPLICATION CLOSE** button
Press to close the active application window.

10 Sleep button
Press to place the computer into Sleep mode to reduce power consumption.

11 Start button
Press to open the **Media Center Start** menu.

12 More button / **OPTIONS** button
Press to view additional options that are available for features on software applications, such as Media Center.

13 Directional arrow buttons
Press the ↑, ↓, ←, and → buttons to move the pointer on the screen.
OK button
Press to select the desired action or window option. When watching full-screen TV, press to return to the previous channel. Press again to switch between channels.

14 Muting button
Press to turn off the sound. Press again to restore the sound.

15 Channel/Page buttons
Press to change or page up/down channels (no number input required).

16 Live TV button
Press to view TV programs.

17 DVD menu button / **MENU** button
Press to open the main menu on the playback media, such as a DVD media.

18 **ENTER** button
Press to activate a feature or an action, such as channel selection or a return to the previous channel. (This button's actions are similar to using the **OK** button.)

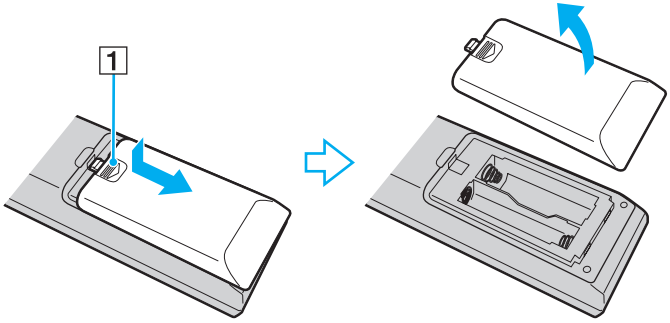
Before you use the remote commander

Before using the remote commander, you need to insert the supplied AA manganese batteries to enable communication between the computer and the remote commander.

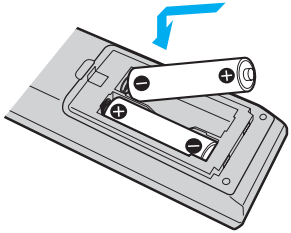
To insert batteries

1 Turn the remote commander over.

2 Slightly push down the dented area (1), slide the battery cover in the direction of the arrow, and remove the cover.



3 Insert the supplied two AA batteries into the remote commander.



4 Put the battery cover back on the remote commander and slide it in the reverse direction of the arrow illustrated above until the cover clicks into place.

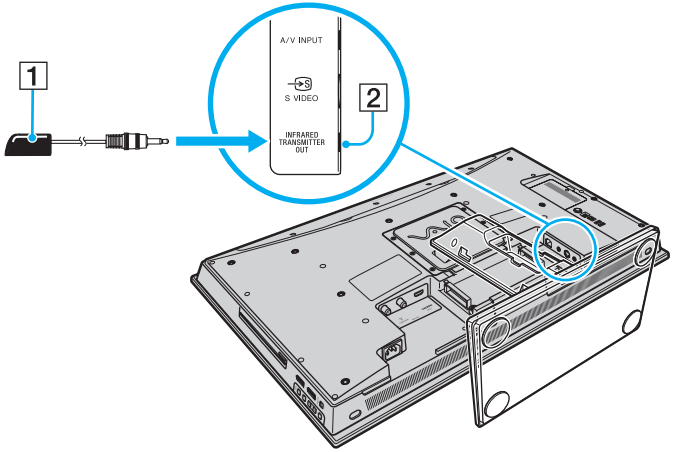
If the remote commander does not operate properly, you may need to replace the batteries. When the remote commander is not going to be used for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

To connect the remote sensor control

If you are using a cable or satellite set-top box, you can attach the remote sensor control to the set-top box, which enables you to control the set-top box with the remote commander.

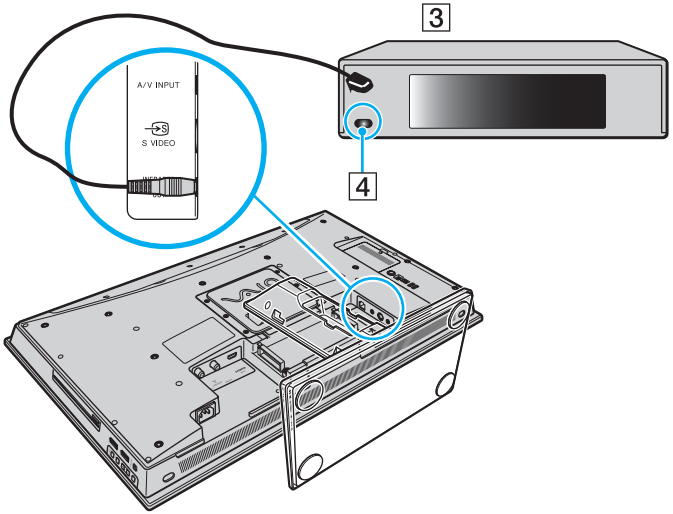
You need to remove the back panel cover from the computer before connecting the remote sensor control. See **Removing and Replacing the Covers (page 18)** for the procedure.

1 Plug the cable from the remote sensor control (1) (supplied) into the **INFRARED TRANSMITTER OUT** jack (2) on the computer.



2 Remove the adhesive tape cover from the bottom of the remote sensor control (1).

3 Attach the remote sensor control (1) onto the set-top box (3) near the infrared sensor (4).



! Do not cover the infrared sensor when attaching the remote sensor control.

The remote sensor must be visible in a line of sight with the remote commander in order to function properly.

Using the HDMI Input Function

Your computer may be equipped with an **HDMI INPUT** port that enables you to connect a device with the HDMI output port, such as a hard disk drive recorder, to the computer. With the HDMI Input function, the computer can receive the high-definition video and sound outputs from the connected device and you can view and hear them on the computer without turning on your computer and starting Windows.

See the online specifications to find out if your computer is equipped with the **HDMI INPUT** port.

!
You cannot record the HDMI input, such as a TV program, displayed on your computer or control the **Windows Media Center** with the HDMI Input function.

Using the HDMI Input Control Buttons

The HDMI input control buttons allow you to switch the display and sound input between the computer input and the HDMI input from the connected device and change the display and sound settings for the HDMI input.

HDMI input control buttons	Functions
HDMI SELECT button	Toggles the display and sound input between the computer input and the HDMI input from the connected device. When the HDMI input is selected, the **HDMI SELECT** button and the **HDMI SELECT** indicator light illuminate in green.
MENU button	Displays the On-Screen Display (OSD) menu. You can change the display and sound settings for the HDMI input with the OSD menu.
Up/Down buttons	Increase (▲) or decrease (▼) the volume while the HDMI input is selected. While the OSD menu is displayed, you can use these buttons to select your desired item.
OK button	Confirms your selection.

Connecting and Using the HDMI-Compatible Device

You need to connect the HDMI-compatible device to your computer with an HDMI cable to display the HDMI input from the device on the computer.

! Be sure to use an HDMI cable approved by HDMI Licensing, LLC.

To connect your computer to the HDMI-compatible device

✍ You need to remove the back panel cover from the computer and the base stand cover from the base stand before setting up the HDMI connection. See **Removing and Replacing the Covers** (page 18) for the procedure. For information on how to connect cables to the computer, see **Connecting a Power Source and Cables** (page 23).

If you have enabled the Auto Input Sensing feature with the OSD menu, turning on the connected device automatically selects the HDMI input. For instructions on how to enable or disable the Auto Input Sensing feature, see **Changing the Display and Sound Settings for the HDMI Input** (page 79).

1. Connect an HDMI cable (not supplied) to the HDMI output port on the device and the other end to the **HDMI INPUT** port on the computer.
2. Turn on the connected device.

✍ You do not need to turn on your computer to switch the display input.

3. Press the **HDMI SELECT** button to switch the display input to the HDMI input.
   The **HDMI SELECT** button and the **HDMI SELECT** indicator light illuminate in green.

✍ Unless you have switched the display input to the computer input since the last time you viewed the HDMI input on the computer, you do not need to change the display input. If you want to change the display input, press the **HDMI SELECT** button.

To change the HDMI input volume

Press the Up (▲) or the Down (▼) button to increase or decrease the volume.

!
While the HDMI input is selected:

- You can only use the Up/Down buttons to change the volume. You cannot use the volume control buttons on the wireless keyboard or the supplied remote commander to change the volume.
- You can only use the OSD menu to change the brightness. You cannot use the function keys on the wireless keyboard to change the brightness.

Changing the Display and Sound Settings for the HDMI Input

You can change the display and sound settings for the HDMI input with the OSD menu. The following shows how to change the language mode of the OSD menu, enable or disable the Auto Input Sensing feature, and change the default SONY logo lamp activity while the HDMI input is selected.

To select the language mode of the OSD menu

1. Press the **MENU** button to display the OSD menu.
2. Press the Up (▲) or Down (▼) button to select **OPTION** and then the **OK** button.
3. Press the Up (▲) or Down (▼) button to select **LANGUAGE** and then the **OK** button.
4. Press the Up (▲) or Down (▼) button to select the desired language and then the **OK** button.

To enable or disable the Auto Input Sensing feature

1. Press the **MENU** button to display the OSD menu.
2. Press the Up (▲) or Down (▼) button to select **OPTION** and then the **OK** button.
3. Press the Up (▲) or Down (▼) button to select **INPUT SENSING** and then the **OK** button.
4. Press the Up (▲) or Down (▼) button to select **AUTO ON** or **AUTO OFF** and then the **OK** button.

To change the default SONY lamp activity

! You cannot change this option when the computer input is selected.

1. Press the **MENU** button to display the OSD menu.
2. Press the Up (▲) or Down (▼) button to select **OPTION** and then the **OK** button.
3. Press the Up (▲) or Down (▼) button to select **LOGO LAMP** and then the **OK** button.
4. Press the Up (▲) or Down (▼) button to select **ON** or **OFF** and then the **OK** button.

Viewing TV Programs with the HDMI Input Function

If you are using a set-top box with an HDMI output port to view TV programs, you can display them on your computer with the HDMI Input function.

!
You cannot record the HDMI input, such as a TV program, displayed on your computer or control the **Windows Media Center** with the HDMI Input function.

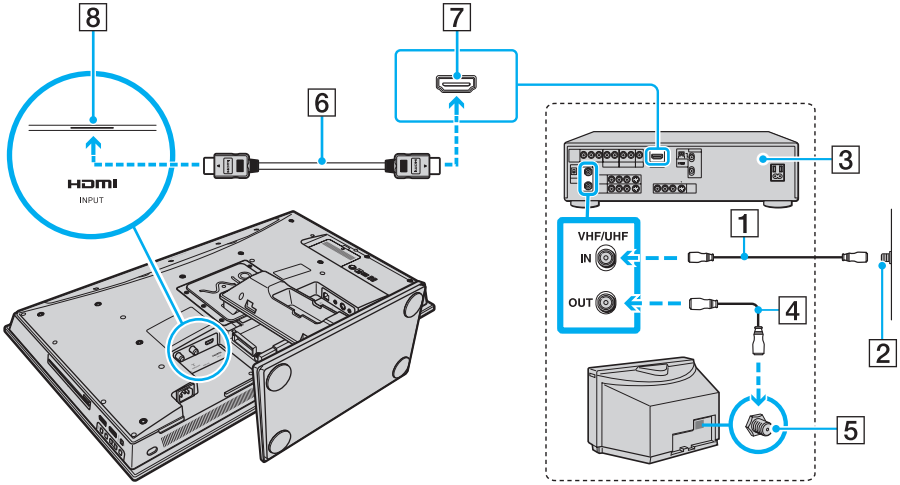
✍
You need to remove the back panel cover from the computer and the base stand cover from the base stand before connecting an HDMI cable. See **Removing and Replacing the Covers** **(page 18)** for the procedure. For information on how to connect cables to the computer, see **Connecting a Power Source and Cables** **(page 23)**.

To connect a set-top box using the HDMI INPUT port

1 Connect one end of a TV coaxial cable (1) (supplied) to your cable service access (wall outlet) (2). Connect the other end to the VHF/UHF input port on the back panel of your set-top box (STB) (3).

2 Connect a second TV coaxial cable (4) (not supplied) to the VHF/UHF output port on the set-top box (STB) (3). Connect the other end to the VHF/UHF input port (5) on your TV monitor or display.

3 Connect an HDMI cable (6) (not supplied) to the HDMI output port (7) on the set-top box (STB) and the other end to the **HDMI INPUT** port (8) on the computer.

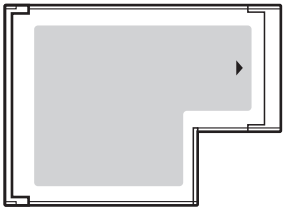


Using the ExpressCard Module

Your computer is equipped with either a Universal ExpressCard slot* or an ExpressCard/34 slot* for transferring data among digital cameras, camcorders, music players, and other audio/video devices. The former can accommodate either an ExpressCard/34 (34 mm wide) or ExpressCard/54 (54 mm wide) module* as shown below and the latter can accommodate only an ExpressCard/34 module* only.

- ExpressCard/34 module*

- ExpressCard/54 module*



Your computer is equipped with an ExpressCard/34 slot*.

* Referred to as the ExpressCard slot and the ExpressCard module in this manual.

Inserting an ExpressCard Module

! Your computer is supplied with a slot protector in the ExpressCard slot. Remove the slot protector before you use the slot.

Use care when inserting or removing the ExpressCard module from the slot. Do not force it in or out of the slot.

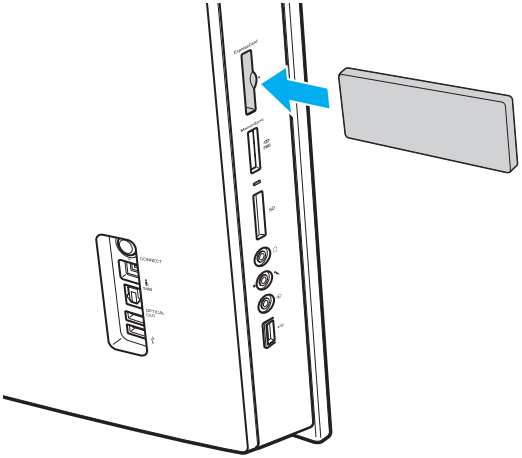
✍ You do not need to shut down your computer before inserting or removing the ExpressCard module.

To insert an ExpressCard module

1. Locate the ExpressCard slot (page 16).
2. Push the ExpressCard slot protector to pop it out.
3. Gently take hold of the ExpressCard slot protector and pull it out of the slot.
4. Carefully slide the ExpressCard module into the slot until it clicks into place.

! Make sure that the arrow on the ExpressCard module is pointing toward the ExpressCard slot.

Do not force the ExpressCard module into the slot.



!
Insert the ExpressCard slot protector to block any particles from entering the slot when not using an ExpressCard module. Before moving your computer, be sure to insert the ExpressCard slot protector into the slot.

If the module or adapter does not go into the slot easily, remove it gently and verify you are inserting it in the proper direction.

Make sure you use the most recent software driver provided by the ExpressCard module manufacturer.

Removing an ExpressCard Module

Follow the steps below to remove the ExpressCard module while your computer is on. If it is not removed properly, your system may not work properly.

To remove an ExpressCard module

✍
To remove an ExpressCard module when your computer is off, skip steps 1 to 4.

1. Double-click the **Safely Remove Hardware** icon on the taskbar.
2. Select the hardware you want to unplug.
3. Click **Stop**.
4. Follow the on-screen instructions to remove the ExpressCard module.
5. Push in the ExpressCard module toward the computer so that the module pops out.
6. Gently take hold of the ExpressCard module and pull it out of the slot.

Using the Memory Stick

Memory Stick is a compact, portable, and versatile IC recording media especially designed for exchanging and sharing digital data with compatible products, such as digital cameras, mobile phones, and other devices. Because it is removable, it can be used for external data storage.

Before You Use the Memory Stick

The Memory Stick slot on your computer can accommodate both standard- and Duo-size media and supports Memory Stick PRO and Memory Stick PRO-HG Duo formats with high speed data transfer and large data capacity capabilities.

✍ You can insert a Duo-size Memory Stick directly into the Memory Stick slot without using a Memory Stick Duo adaptor.

! Before using a Memory Stick Micro (M2), be sure to insert it into an M2 Standard-size adaptor or M2 Duo adaptor. If you insert the media directly into the Memory Stick slot without the adaptor, you may not be able to remove it from the slot.

For the latest information about the Memory Stick, visit the Memory Stick web site at http://www.memorystick.com/en/.

! Your computer has been tested and found compatible with Sony branded Memory Stick with capacity of up to 16 GB that are available as of May 2008. However, not all Memory Stick that meet the same specifications as the compatible media are guaranteed of compatibility.

Inserting a Memory Stick with multiple conversion adapters is not guaranteed of compatibility.

MagicGate is the general name of the copyright protection technology developed by Sony. Use a Memory Stick with the MagicGate logo to use this feature.

Except for your personal use, it is against the copyright law to use any audio and/or image data you recorded without prior consent from the respective copyright holders. Accordingly, the Memory Stick with such copyrighted data can be used only within the law.

The Memory Stick slot on your computer does not support 8-bit parallel data transfer (high speed data transfer).

The Memory Stick Micro in an M2 Duo adaptor may not operate properly if it is additionally inserted into a Memory Stick Duo adaptor.

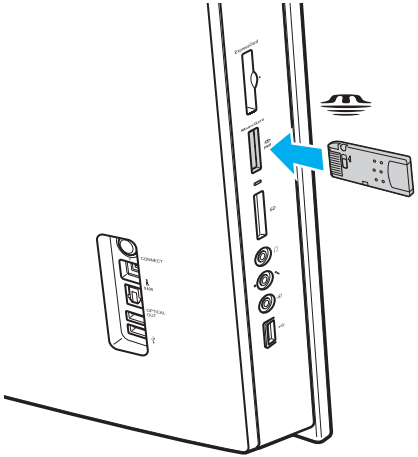
Inserting a Memory Stick

To insert a Memory Stick

1 Locate the Memory Stick slot (page 16).

2 Hold the Memory Stick with the arrow pointing toward the slot.

3 Carefully slide the Memory Stick into the slot until it clicks into place.
The Memory Stick is automatically detected by your system and the contents on the Memory Stick are displayed. If nothing appears on the desktop, click **Start**, **Computer**, and double-click the Memory Stick icon.



!
Be sure to hold the Memory Stick with the arrow pointing in the correct direction as you insert it into the slot. To avoid damaging your computer or the Memory Stick, do not force the Memory Stick into the slot if you cannot insert it smoothly.

Do not insert more than one Memory Stick into the slot. Improper insertion of the media may damage both your computer and the media.

To view the contents on the Memory Stick

1 Click **Start** and **Computer** to open the **Computer** window.

2 Double-click the Memory Stick icon to view the list of data files saved in the Memory Stick.

To format a Memory Stick

The Memory Stick has been formatted in the factory default setting and is ready for use.
If you want to reformat the media with your computer, follow these steps.

!
Be sure to use the device that is designed to format the media and supports the Memory Stick when formatting the media.

Formatting the Memory Stick erases the entire data on the media. Before formatting the media, make sure that it does not contain your valuable data.

Do not remove the Memory Stick from the slot while formatting. This could cause a malfunction.

1. Carefully slide the Memory Stick into the slot until it clicks into place.
2. Click **Start** and **Computer** to open the **Computer** window.
3. Right-click the Memory Stick icon and select **Format**.
4. Click **Restore device defaults**.

!
The size of the allocation unit and file system may change.

Do not select **NTFS** from the **File system** drop-down list as it may cause a malfunction.

✍
The formatting process will be completed more quickly if you select **Quick Format** in **Format options**.

5. Click **Start**.
6. Follow the on-screen instructions.

!
It may take time to format the Memory Stick depending on the media type.

Removing a Memory Stick

!
Do not remove the Memory Stick while the Media Access indicator light is lit. If you do, you may lose data. Large volumes of data may take time to load, so make sure the indicator is unlit before removing the Memory Stick.

To remove a Memory Stick

1. Check that the Media Access indicator light is unlit.
2. Push in the Memory Stick toward the computer and release.
   The Memory Stick ejects.
3. Pull the Memory Stick out of the slot.

!
Always remove the Memory Stick gently, or it may pop out unexpectedly.

Using the SD Memory Card

Your computer is equipped with an **SD** memory card slot. You can use this slot to transfer data among digital cameras, camcorders, music players, and other audio/video devices.

Before You Use the SD Memory Card

The **SD** memory card slot on your computer supports the following memory cards:

- SD memory card
- SDHC memory card
- MultiMediaCard (MMC)

For the latest information on compatible memory cards, see **Sony Support Information** **(page 193)** to visit the appropriate support web site.

!
Your computer has been tested and found compatible only with major memory cards available as of May 2008. However, not all memory cards that meet the same specifications as the compatible media are guaranteed of compatibility.

Always insert the correct memory card into the **SD** memory card slot.

SD memory cards with capacity of up to 2 GB and SDHC memory cards with capacity of up to 32 GB have been tested and found compatible with your computer.

The **SD** memory card slot on your computer does not support the high-speed data transfer feature of the SD memory card and the SDHC memory card.

Do not attempt to insert an SD memory card or SD memory card adapter of a different type into the **SD** memory card slot. An incompatible memory card or memory card adapter may cause difficulty in removing from the slot and can cause damage to your computer.

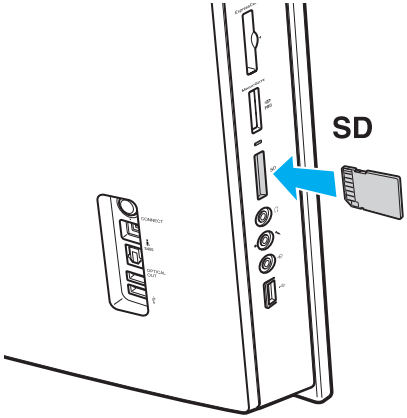
Use care when inserting or removing an SD memory card from the **SD** memory card slot. Do not force the SD memory card in or out of the slot.

Inserting an SD Memory Card

To insert an SD memory card

1 Locate the **SD** memory card slot (page 16).

2 Hold the SD memory card with the arrow pointing toward the slot.



3 Carefully slide the SD memory card into the slot until it clicks into place.
Do not force the card into the slot.

If the SD memory card does not go into the slot easily, remove it gently and verify you are inserting it in the proper direction.

Removing an SD Memory Card

!
Do not remove an SD memory card while the Media Access indicator light is lit. If you do, the card or its data may become damaged.

To remove an SD memory card

1. Check that the Media Access indicator light is unlit.
2. Push in the SD memory card toward the computer and release.
   The SD memory card ejects.
3. Pull the SD memory card out of the slot.

Using the Internet

To use the Internet, you need to connect an external modem device, for example a USB telephone modem, an xDSL modem, or a cable modem, to your computer. For the detailed instructions on connection setups and modem configuration, see the manual that came with your modem.

Using Wireless LAN (WLAN)

Using the Sony Wireless LAN (WLAN), all your digital devices with built-in WLAN function communicate freely with each other through a network. A WLAN is a network in which a user can connect to a Local Area Network (LAN) through a wireless (radio) connection. This eliminates the need to pull cables or wires through walls and ceilings.

You can communicate without an access point, which means that you can communicate with a limited number of computers (ad-hoc). Or you can communicate through an access point, which allows you to create a full infrastructure network.

To use the wireless LAN function

You need to set up the wireless LAN network with the **SmartWi Connection Utility**. See the **SmartWi Connection Utility Help** for more information.

To access this on-screen guide:

1 Click **Start**, **All Programs**, and **SmartWi Connection Utility**.

2 Click **SmartWi Connection Utility Help**.

! Be sure to turn on the **WIRELESS** switch before starting the **SmartWi Connection Utility**.

You cannot select the 5 GHz bandwidth, which is used for the IEEE 802.11a standard, on ad-hoc networks.

The IEEE 802.11n draft standard, using the 2.4 or 5 GHz bandwidth, is not available on ad-hoc networks.

In some countries, using WLAN products may be restricted by the local regulations (e.g. limited number of channels). Therefore, before activating the WLAN function, read the **Safety Information** carefully.

WLAN uses the IEEE 802.11a*/b/g standard or the IEEE 802.11n* draft standard, which specifies the used technology. The standard includes the encryption methods: Wired Equivalent Privacy (WEP), which is a security protocol, Wi-Fi Protected Access 2 (WPA2), and Wi-Fi Protected Access (WPA). Proposed jointly by the IEEE and Wi-Fi Alliance, both WPA2 and WPA are specifications of standards based on interoperable security enhancements that increase the level of data protection and access control for existing Wi-Fi networks. WPA has been designed to be forward compatible with the IEEE 802.11i specification. It utilizes the enhanced data encryption TKIP (Temporal Key Integrity Protocol) in addition to user authentication using 802.1X and EAP (Extensible Authentication Protocol). Data encryption protects the vulnerable wireless link between clients and access points. Besides that, there are other typical LAN security mechanisms to ensure privacy, such as: password protection, end-to-end encryption, virtual private networks, and authentication. WPA2, the second generation of WPA, provides stronger data protection and network access control and is also designed to secure all versions of 802.11 devices, including 802.11b, 802.11a, 802.11g, and 802.11n draft standard, multi-band and multi-mode. In addition, based on the ratified IEEE 802.11i standard, WPA2 provides government grade security by implementing the National Institute of Standards and Technology (NIST) FIPS 140-2 compliant AES encryption algorithm and 802.1X-based authentication. WPA2 is backward compatible with WPA.

* See the online specifications to find out whether your model supports the IEEE 802.11a standard and/or the IEEE 802.11n draft standard.

The IEEE 802.11b/g standard is a wireless LAN standard, using the 2.4 GHz bandwidth. The IEEE 802.11g standard provides high-speed communications, faster than the IEEE 802.11b standard.

The IEEE 802.11a standard is a wireless LAN standard, using the 5 GHz bandwidth.

The IEEE 802.11n draft standard is a wireless LAN standard, using the 2.4 or 5 GHz bandwidth.

Wireless LAN devices using the 2.4 GHz bandwidth cannot communicate with devices using the 5 GHz bandwidth because the frequencies are different.

The 2.4 GHz bandwidth used by wireless LAN compatible devices is also used by other various devices. Although technologies to minimize interference from other devices that use the same bandwidth are employed on wireless LAN compatible devices, such interference may cause lower communication speed, narrower communication range, or broken wireless connections.

The communication speed varies depending on the distance between communication devices, existence of obstacles between such devices, the device configuration, the radio conditions, and the software in use. In addition, communications may be cut off depending on the radio conditions.

The communication range varies depending on the actual distance between communication devices, existence of obstacles between such devices, the radio conditions, the ambient environment that includes existence of walls and materials of such walls, and the software in use.

Actual communication speed may not be as fast as the one displayed on your computer.

Deploying IEEE 802.11b and IEEE 802.11g products on the same wireless network may reduce the communication speed due to radio interference. Taking this into consideration, the IEEE 802.11g products are designed to reduce the communication speed to ensure communications with IEEE 802.11b products. When the communication speed is not as fast as expected, changing the wireless channel on the access point may increase the communication speed.

Using the Bluetooth Function

The Bluetooth function is available on selected models only. See the online specifications to find out whether your model supports the Bluetooth function.

You can establish wireless communication between your computer and other Bluetooth devices such as another computer or a mobile phone. You can transfer data between these devices without cables at a range of up to 33 feet (10 meters) in an open area.

To use the Bluetooth function

You need to set up the Bluetooth function with the **SmartWi Connection Utility**. See the **SmartWi Connection Utility Help** for more information.

To access this on-screen guide:

1. Click **Start**, **All Programs**, and **SmartWi Connection Utility**.
2. Click **SmartWi Connection Utility Help**.

!
Be sure to turn on the **WIRELESS** switch before starting the **SmartWi Connection Utility**.

Notes on using the Bluetooth function

- The data transfer rate varies, depending on the following conditions:
  - Obstacles, such as walls, located between devices
  - Distance between devices
  - Material used in walls
  - Proximity to microwaves and cordless telephones
  - Radio frequency interference and other environmental conditions
  - Device configuration
  - Type of software application
  - Type of operating system
  - Use of both wireless LAN and Bluetooth functions at the same time on your computer
  - Size of file being exchanged
- Note that large files may occasionally be corrupted during continuous transfer due to limitations of the Bluetooth standard and electromagnetic interference in the environment.
- All Bluetooth devices must be certified to make sure that the applicable standard requirements are maintained. Even if standards are met, individual device performance, specifications, and operation procedures can vary. Data exchange may not be possible in all situations.
- Video and audio may not be synchronized if you play videos on your computer with audio output from a connected Bluetooth device. This is a frequent occurrence with Bluetooth technology and is not a malfunction.

- The 2.4 GHz band, with which Bluetooth devices or wireless LAN devices work, is used by various devices. Bluetooth devices use the technology to minimize the interference from other devices that use the same wave length. Simultaneous use of the Bluetooth function and wireless communication devices, however, may cause radio interference and result in reduced communication speeds and distances than the standard values.
- The Bluetooth function may not work with other devices, depending on the manufacturer or the software version employed by the manufacturer.
- Connecting multiple Bluetooth devices to your computer may cause bandwidth congestion, resulting in poor performance of the devices. This is normal with Bluetooth technology and is not a malfunction.

Bluetooth Security

The Bluetooth wireless technology has an authentication function, which allows you to determine with whom you choose to communicate. With the authentication function, you can prevent any anonymous Bluetooth devices from accessing your computer.

The first time two Bluetooth devices communicate, a common passkey (a password required for authentication) should be determined for both devices to be registered. Once a device is registered, there is no need to re-enter the passkey.

✍
The passkey can be different each time, but must be the same at both ends.

For certain devices, such as a mouse, no passkey can be entered.

Communicating with Another Bluetooth Device

You can connect your computer to a Bluetooth device such as another computer, a mobile phone, a PDA, a headset, a mouse, or a digital camera without the use of any cables.

To communicate with another Bluetooth device

To communicate with another Bluetooth device, you first need to set up the Bluetooth function. For setting up and using the Bluetooth function, search for Bluetooth information using **Windows Help and Support**. To open **Windows Help and Support**, click **Start** and **Help and Support**.

Using Peripheral Devices

You can add functionality to your VAIO computer by using the various ports on the computer.

❑ **Connecting External Speakers (page 105)**
❑ **Connecting a Universal Serial Bus (USB) Device (page 107)**
❑ **Connecting a Printer (page 109)**
❑ **Connecting an i.LINK Device (page 110)**
❑ **Connecting to a Network (LAN) (page 112)**

Connecting External Speakers

You can connect external sound output devices (not supplied), such as speakers or headphones, to your computer.

Since your computer is capable of outputting digital signals through the **OPTICAL OUT** port, you can connect an S/PDIF device such as digital headphones or an AV amplifier to the port and enhance the sound quality of your computer. For more information, see the manual that came with your S/PDIF device.

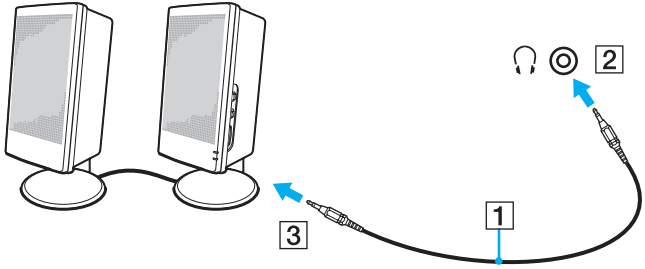
!
To hear sound from the S/PDIF device connected to the **OPTICAL OUT** port, you need to change the sound output device. For the detailed instructions, see **How do I change the sound output device? (page 186)**.

To connect external speakers

1 Plug the speaker cable (1) (not supplied) into the headphones jack (2) ∩.

2 Plug the other end of the speaker cable to the external speaker (3).

3 Turn down the volume of the speakers before you turn them on.



✍
Make sure your speakers are designed for computer use.

!
Do not place floppy disks on the speakers. Their magnetic field may damage the data on the disks.

Connecting a Universal Serial Bus (USB) Device

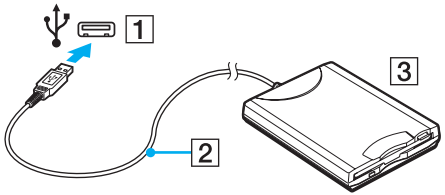
To protect your computer and/or USB devices from damage, avoid exposing the USB ports to shock or impact when moving the computer with USB devices connected.

Connecting a USB Floppy Disk Drive

You can purchase a USB floppy disk drive and connect it to your computer.

To connect a USB floppy disk drive

1. Choose the USB port (1) you prefer to use.
2. Plug the USB floppy disk drive cable (2) into the USB port.
   Your USB floppy disk drive (3) is now ready for use.



! When using a USB floppy disk drive, do not apply force to the USB port. This may cause a malfunction.

Disconnecting a USB floppy disk drive

You can disconnect a USB floppy disk drive when your computer is on or off. Disconnecting the drive when the computer is in Sleep mode may cause the computer to malfunction.

To disconnect a USB floppy disk drive

To disconnect a USB floppy disk drive when your computer is off, skip steps 1 to 5.

1. Close all programs accessing the floppy disk drive.
2. Double-click the **Safely Remove Hardware** icon on the taskbar.
3. Select the floppy disk drive you want to unplug.
4. Click **Stop**.
5. Follow the on-screen instructions to remove the floppy disk drive.
6. Disconnect the floppy disk drive from the computer.

Connecting a Printer

You can connect a Windows-compatible printer to your computer to print documents.

Connecting a Printer Using the USB Port

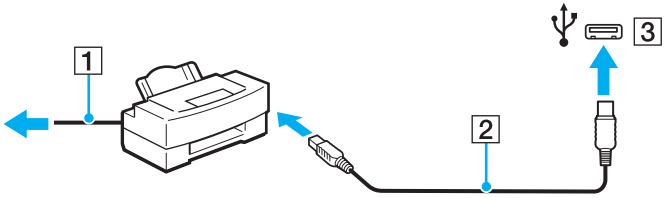
You can connect a USB printer compatible with your version of Windows to the computer.

To connect a printer using the USB port

1 Plug the power cord (1) of your printer into an AC outlet.

2 Choose the USB port (3) you prefer to use.

3 Plug one end of a USB printer cable (2) (not supplied) into the USB port and the other end to your printer.



Connecting an i.LINK Device

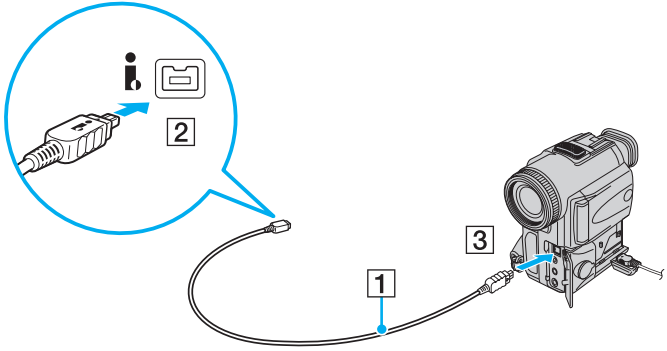
Notes on connecting i.LINK devices

- Your computer is equipped with an i.LINK port, which you can use to connect an i.LINK device, such as a digital video camcorder.
- The i.LINK port on your computer does not supply power to external devices that are generally powered through i.LINK ports.
- The i.LINK port supports transfer rates up to 400 Mbps. However, the actual transfer rate depends on the transfer rate of the external device.
- The optional i.LINK cables may not be available in some countries or areas.
- An i.LINK connection with other compatible devices is not fully guaranteed.
- The i.LINK connection may not be available depending on the software applications, operating system, and i.LINK-compatible devices you use. See the manual that came with your software for more information.
- Check the working conditions and operating system compatibility of i.LINK-compatible PC peripherals (for example, an HDD or a CD-RW drive) before you connect them to your computer.

Connecting a Digital Video Camcorder

To connect a digital video camcorder

Plug one end of an i.LINK cable (1) (not supplied) into the i.LINK port (2) on the computer and the other end into the DV In/Out port (3) on the digital video camcorder.



On Sony digital video cameras, ports labeled **DV Out**, **DV In/Out**, or **i.LINK** are i.LINK-compatible.

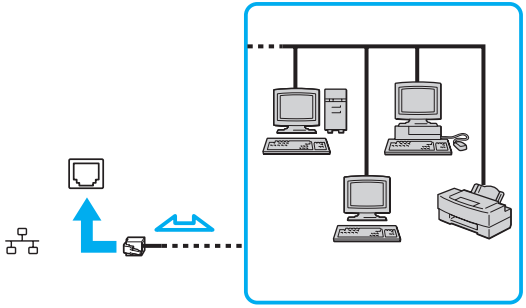
The Sony digital video camcorder shown here is an example. Your digital video camcorder may need to be connected differently.

You cannot access the pictures stored on a Memory Stick when using an i.LINK connection.

Connecting to a Network (LAN)

You can connect your computer to 1000BASE-T/100BASE-TX/10BASE-T-type networks with an Ethernet network cable. Connect one end of a network cable (not supplied) to the network (Ethernet) port on the back of the computer and the other end to your network. For detailed settings and devices needed to connect to the network, ask your network administrator.

✍ You need to remove the back panel cover from the computer to access the network (Ethernet) port. See **Removing and Replacing the Covers** **(page 18)** for the procedure.



✍ Your computer can be connected to the network with the default settings.

!
Do not plug a telephone cable into the network (LAN) port on your computer.
If the network (LAN) port is connected to one of the telephone lines mentioned below, high electric current to the port may cause damage, overheating, or fire.

- Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)
- Public telephone subscriber line
- PBX (private branch exchange)

Do not plug a telephone cable into the network (Ethernet) port.

Customizing Your VAIO Computer

This section briefly describes how to change the main settings of your VAIO computer. Among other things, you will learn how to use and customize the look of your Sony software and utilities.

❑ **Setting the Password (page 115)**
❑ **Setting Up Your Computer with VAIO Control Center (page 120)**
❑ **Using the Power Saving Mode (page 121)**

Setting the Password

Use one of the BIOS functions to set the password.

Once you have set the password, you will be prompted to enter the password after the VAIO logo appears to start your computer. The power-on password allows you to protect your computer from unauthorized access.

Adding the Power-on Password

The power-on password is provided to protect your computer from unauthorized access.

There are two types of the power-on passwords: the machine password and the user password. The machine password is provided for users with administrative rights on the computer to change all the setup options in the BIOS setup screen, as well as to start the computer. The user password is provided for the standard users to allow for changing some of the BIOS setup options, as well as starting the computer. To set the user password, you must first set the machine password.

!
Once you have set the power-on password, you cannot start your computer without entering the password. Be sure not to forget the password. Write down your password and keep it safe and private from other people.

If you forget the power-on password and need assistance to reset it, a password reset fee will be charged, and your computer may need to be sent in for service to reset the password.

To add the power-on password (machine password)

1. Turn on the computer.
2. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer and press the **F2** key several times when the VAIO logo appears.
3. Press the ← or → key to select **Security** to display the **Security** tab, select **Set Machine Password**, and then press the **Enter** key.
4. On the password entry screen, enter the password twice and press the **Enter** key.
   The password can be up to 32 alphanumeric characters (including spaces) long.
5. Select **Password when Power On** under **Security** and press the **Enter** key.
6. Change the setting from **Disabled** to **Enabled**.
7. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

To add the power-on password (user password)

! Make sure you set the machine password before setting the user password.

1. Turn on the computer.
2. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer and press the **F2** key several times when the VAIO logo appears.
3. Enter the machine password and press the **Enter** key.
4. Press the ← or → key to select **Security** to display the **Security** tab, select **Set User Password**, and then press the **Enter** key.
5. On the password entry screen, enter the password twice and press the **Enter** key.
   The password can be up to 32 alphanumeric characters (including spaces) long.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

Changing/Removing the Power-on Password

To change or remove the power-on password (machine password)

1. Turn on the computer.
2. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer and press the **F2** key several times when the VAIO logo appears.
3. Enter the machine password and press the **Enter** key.
4. Press the ← or → key to select **Security** to display the **Security** tab, select **Set Machine Password**, and then press the **Enter** key.
5. On the password entry screen, enter the current password once and a new password twice, and then press the **Enter** key.
   To remove the password, leave the **Enter New Password** and **Confirm New Password** fields blank and press the **Enter** key.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

To change or remove the power-on password (user password)

1. Turn on the computer.
2. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer and press the **F2** key several times when the VAIO logo appears.
3. Enter the user password and press the **Enter** key.
4. Press the ← or → key to select **Security** to display the **Security** tab, select **Set User Password**, and then press the **Enter** key.
5. On the password entry screen, enter the current password once and a new password twice, and then press the **Enter** key.
   To remove the password, leave the **Enter New Password** and **Confirm New Password** fields blank and press the **Enter** key.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

Setting Up Your Computer with VAIO Control Center

The **VAIO Control Center** utility allows you to access system information and to specify preferences for system behavior.

To use VAIO Control Center

1. Click **Start**, **All Programs**, and **VAIO Control Center**.
2. Select the desired control item and change the settings.
3. Once finished, click **OK**.
   The setting of the desired item has been changed.

   For more information about each option, see the help file included with the **VAIO Control Center**.

   Some of the control items will not be visible if you open the **VAIO Control Center** as a standard user.

Changing the default SONY logo lamp activity

The **SONY** logo lamp illuminates when you turn on your computer. You can change this default activity of the lamp to make it stay unlit by following these steps:

1. Click **Start**, **All Programs**, and **VAIO Control Center**.
2. Click **Display** and **Logo Lamp Control**.
3. Follow the on-screen instructions.

Using the Power Saving Mode

In addition to the normal operating mode, which allows you to turn off specific devices, your computer has a distinct power saving mode called Sleep mode.

Using Normal Mode

This is the normal state of the computer when it is in use. The green power indicator light is lit in this mode. To save power while not working, you can turn off a specific device such as the LCD screen or the hard disk drive.

Using Sleep Mode

Sleep mode turns off the LCD screen and places the hard disk drive and the CPU into a low power consumption mode. The orange power indicator light illuminates in this mode.

! Turn off your computer if you do not intend to use it for a long period of time.

To activate Sleep mode

Click **Start**, the arrow next to the **Lock** button, and **Sleep**.

✍ Alternatively, you can press the sleep button on the wireless keyboard or the remote commander to place your computer into Sleep mode.

When your computer is in Sleep mode, you cannot insert a disc.

To return to Normal mode

- ❑ Press any key on the wireless keyboard or the sleep button on the remote commander.
- ❑ Press the power button on your computer.

! Make sure that the batteries of your wireless keyboard and remote commander are properly installed and not worn out.

If you press and hold the power button for more than four seconds, your computer will turn off automatically. You will lose all unsaved data.

If the computer is not used for a certain period of time, it will enter Sleep mode. To modify this, you can change the Sleep mode settings.

To change the Sleep mode settings

1. Click **Start**, **Control Panel**, **Hardware and Sound**, and **Power Options**.
2. Click **Change plan settings** under the current power plan.
3. Change the time to place the computer into Sleep mode and click **Save Changes**.

Upgrading Your VAIO Computer

Your VAIO computer and memory modules use high precision components and electronic connectors technology. To avoid invalidation of the warranty during your product warranty period, we recommend that:

- You should contact your dealer to install a new memory module.
- You should not install it yourself, if you are not familiar with upgrading memory on a computer.
- You should not touch the connectors or open the memory module compartment cover.

For the type of module and the amount of memory installed on your model, see the online specifications.

For assistance, contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information** **(page 193)**.

- **Adding and Removing Memory (page 125)**
- **Adding the Hard Disk Drive (page 132)**

Adding and Removing Memory

If you want to expand the functionality of your computer, you can increase the amount of memory by installing optional memory modules. Before you upgrade your computer's memory, read the notes and procedures in the following pages.

Notes on adding/removing memory modules

- Be careful when changing memory. Improper installation of memory modules may cause damage to your system. This damage may void your manufacturer's warranty.
- Only use memory modules that are compatible with your computer. If a memory module is not detected by the computer or the Windows operating system becomes unstable, contact the sales dealer or the manufacturer of your memory module.
- Electrostatic discharge (ESD) can damage electronic components. Before touching a memory module, ensure the following:
  - The procedures described in this document assume user familiarity with the general terminology associated with personal computers and with the safety practice and regulatory compliance requirements for using and modifying electronic equipment.
  - Turn off your computer and disconnect it from the power cord and from any telecommunication links, networks, or modems before you remove any cover or panel from the computer. Failure to do so may result in personal injury or equipment damage.
  - ESD can damage memory modules and other components. Install the memory module only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining contact with an unpainted metal portion of the chassis while performing the procedure.
  - Do not open the memory module package before you are ready to change the module. The package protects the module from ESD.

- Use the special bag supplied with the memory module or wrap the module in aluminum foil to protect it from ESD.
- Introducing any liquids, foreign substances, or objects into the memory module slots or other internal components of your computer will result in damage to the computer and any repair costs will not be covered by the warranty.
- Do not place the memory module in a location subject to:
  - Heat sources such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95°F (35°C) or less than 41°F (5°C)
  - High humidity
- Handle the memory module with care. To avoid injuries to your hands and fingers, do not touch the edges of the components and circuit boards inside your computer.

Removing and Installing a Memory Module

To change or add a memory module

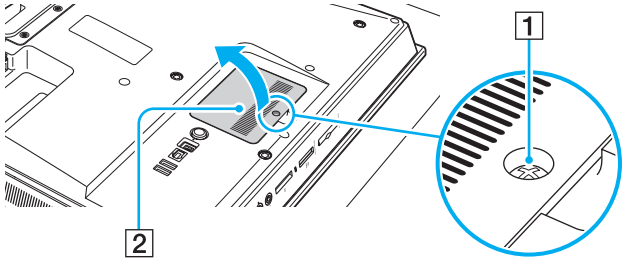
1 Shut down the computer, turn off all peripheral devices, and disconnect peripheral devices from the accessible ports and jacks.

2 Remove the back panel cover from the computer.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

3 Disconnect the power cord and the rest of the peripheral devices.

4 Wait about an hour until the computer cools down.

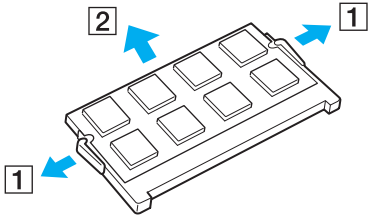
5 Unscrew the screw (1) and remove the memory module compartment cover (2).



6 Touch a metal object to discharge static electricity.

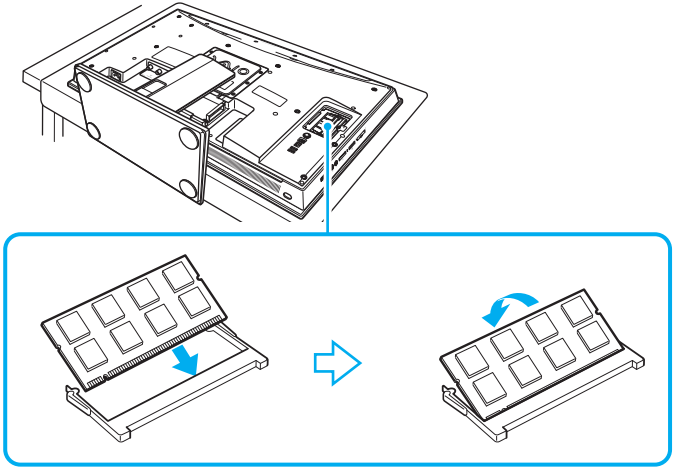
7 Remove the currently installed memory module as follows:

- ❑ Pull the latches in the direction of the arrows (1).
  The memory module is released.
- ❑ Make sure that the memory module tilts up and then pull it out in the direction of the arrow (2).



8 Remove the new memory module from its packaging.

9 Slide the memory module into the memory module slot and push it in until it clicks into place.



!
Do not touch any other components on the motherboard.

If you want to install only one memory module, be sure to use the lower slot.

Be sure to insert the connector edge of the memory module into the slot while aligning the notch on the module with the small projection in the open slot. Do not force the memory module into the slot in a wrong orientation, as it may cause damage to the slot and the module.

10 Replace the memory module compartment cover and tighten the screw.

11 Connect the power cord and the peripheral devices that you disconnected in step 3.

12 Replace the back panel cover.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

13 Plug the computer and the rest of the peripheral devices to the power source.

14 Turn on all peripheral devices and then the computer.

Viewing the Amount of Memory

To view the amount of memory

1 Turn on the computer.

2 Click **Start**, **All Programs**, and **VAIO Control Center**.

3 Click **System Information** and **System Information**.
You can view the amount of system memory in the right pane. If the additional memory does not appear, repeat the installation procedure and restart the computer.

Adding the Hard Disk Drive

Your computer is equipped with the **HARD DISK DRIVE ACCESS BAY** to hold an additional 3.5-inch hard disk drive.

Review the manufacturer's information provided with your new hard disk drive before attempting to install it in the computer.

!
Some hard disks are not compatible with your computer. Contact the manufacturer of your hard disk for compatibility with VAIO computers.

Make sure you unplug your computer and peripheral devices from the power sources before installing or removing a hard disk. Installing or removing a hard disk while your computer is plugged to its power source may cause damage to the computer and the peripheral devices as well as the hard disk.

If you need assistance to install a hard disk, contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information** **(page 193)**.

Installing an Additional Hard Disk Drive

To install an additional hard disk drive

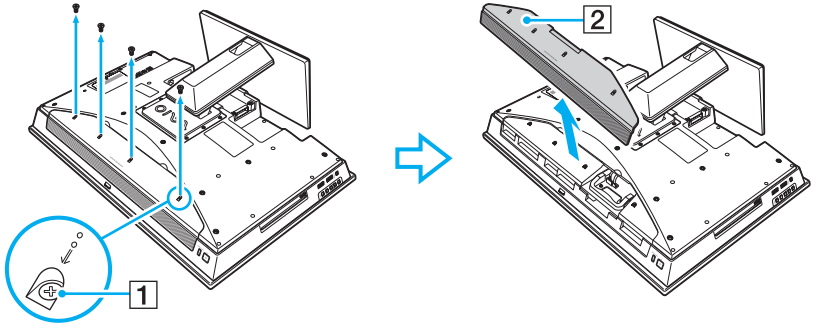
1 Shut down the computer, turn off all peripheral devices, and disconnect peripheral devices from the accessible ports and jacks.

2 Remove the back panel cover from the computer.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

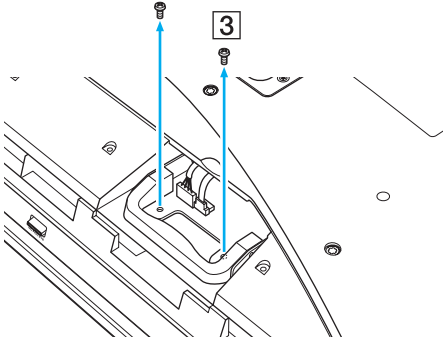
3 Disconnect the power cord and the rest of the peripheral devices.

4 Wait about an hour until the computer cools down.

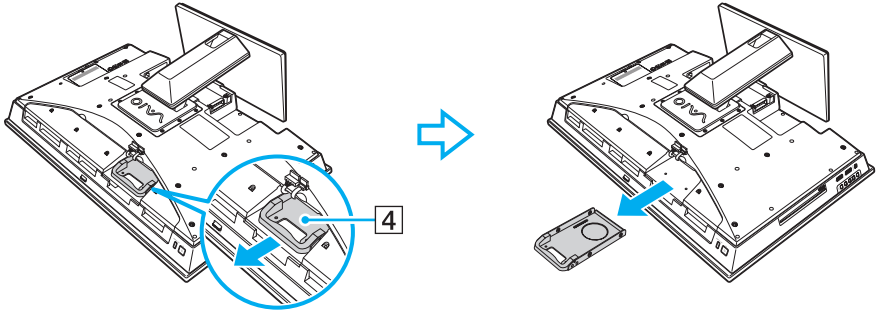
5 Unscrew the four screws (1) and remove the **HARD DISK DRIVE ACCESS BAY** cover (2).



6 Unscrew the two screws (3) securing the drive holder.

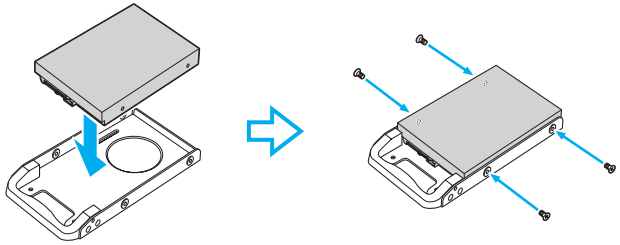


7 Pull out the drive holder (4) from the **HARD DISK DRIVE ACCESS BAY** and set it aside.



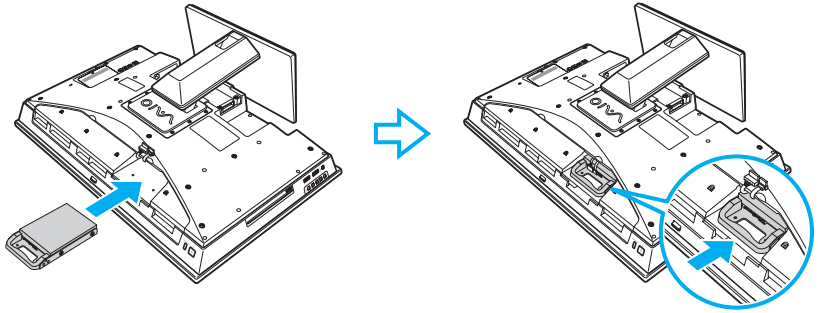
8 Place a new drive into the drive holder and align the holes on each side of the drive holder.

9 Secure the drive to the drive holder with screws, through the holes on each side of the drive holder.



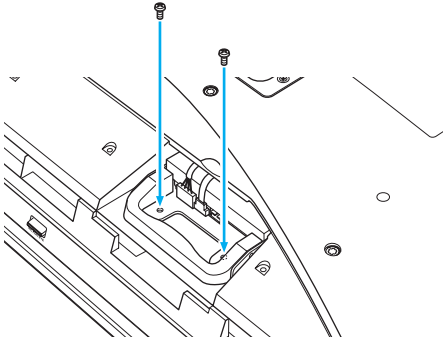
! A new hard disk drive comes with the necessary screws. Do not overtighten these screws when securing the drive to the drive holder.

10 Slide the drive holder into the drive bay until it clicks into place and secure it with the screws.



11 Connect the Serial ATA power cable and the Serial ATA cable.

12 Tighten the screws to secure the drive holder.



13 Replace the drive bay cover and tighten the screws.

14 Connect the power cord and the peripheral devices that you disconnected in step 3.

15 Replace the back panel cover.
See **Removing and Replacing the Covers** **(page 18)** for the procedure.

16 Plug the computer and the rest of the peripheral devices to the power source.

17 Turn on all peripheral devices and then the computer.

Identifying the Additional Hard Disk Space

When you initialize the new hard disk, it must be configured as an extended partition in Windows NT file system (NTFS) format.

To identify the additional hard disk space

1. Log on to Windows as a user with administrative rights.
2. Click **Start**, right-click **Computer**, and select **Manage**.
   The **Computer Management** window appears.
3. Under the file directory on the right, click **Disk Management** under **Storage**.
4. Right-click on the newly installed, unformatted hard disk (disk label identified with red marking) and select **Initialize Disk**.
5. Click on the allocated area of the disk.
6. Right-click the area and select **New Partition**.
   The **New Partition** wizard window appears.
7. Follow the on-screen instructions to complete the process.

The Windows Vista operating system recognizes the new hard disk drive and applies the NTFS format to it.

Precautions

This section describes safety guidelines and precautions to help you protect your VAIO computer from potential damage.

❑ **Handling the LCD Screen (page 139)**
❑ **Using the Power Source (page 140)**
❑ **Handling Your Computer (page 141)**
❑ **Handling the Built-in MOTION EYE Camera (page 144)**
❑ **Handling Floppy Disks (page 145)**
❑ **Handling Discs (page 146)**
❑ **Using Headphones (page 148)**
❑ **Handling the Memory Stick (page 149)**
❑ **Handling the Hard Disk (page 150)**
❑ **Updating Your Computer (page 151)**

Handling the LCD Screen

- Do not leave the LCD screen facing the sun. This could damage the LCD screen. Be careful when using your computer near a window.
- Do not scratch the surface of the LCD screen or exert pressure on it. This could cause a malfunction.
- Using your computer in low temperature conditions may produce a residual image on the LCD screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- A residual image may appear on the LCD screen if the same image is displayed for a long period of time. The residual image disappears after a while. You can use a screen saver to prevent residual images.
- The LCD screen becomes warm during operation. This is normal and does not indicate a malfunction.
- The LCD screen is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD screen. This is a normal result of the manufacturing process and does not indicate a malfunction.
- Avoid rubbing the LCD screen. This could damage the screen. Use a soft, dry cloth to wipe the surface of the LCD screen.
- Do not change the LCD screen orientation setting in the **Tablet PC Settings** window even when there are change options available for selection, as this may make your computer unstable. Sony assumes no liability for any malfunctions arising from changes to the settings.

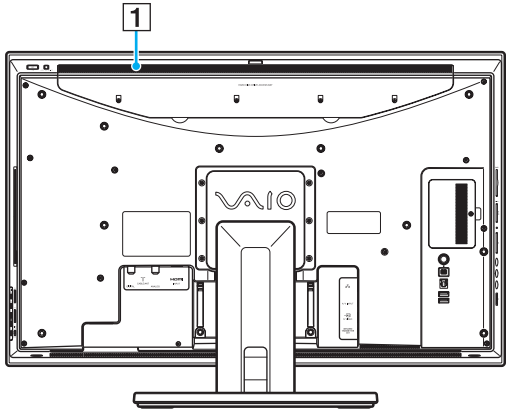
Using the Power Source

- See the online specifications to check the power operation of your model.
- Do not share the AC outlet with other power-consuming equipment, such as a photocopier or a shredder.
- You can purchase a power strip with a surge protector. This device helps prevent damage to your computer caused by sudden power surges, in an electrical storm, for example.
- Do not place heavy objects on the power cord.
- To disconnect the cord, pull it out by holding the plug. Never pull the cord itself.
- Unplug your computer from the AC outlet if you are not planning to use the computer for a long period of time.
- Make sure that the AC outlet is easily accessible.
- Use the power cord supplied with your computer or genuine Sony products. Do not use any other power cord as it may cause a malfunction.

Handling Your Computer

- Clean the cabinet with a soft cloth, which is dry or lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of your computer.
- If you drop a solid object or any liquid onto your computer, shut down the computer and then unplug it. You may want to have the computer checked by qualified personnel before operating it again.
- Do not drop your computer.
- Do not place your computer in a location subject to:
  - Heat sources, such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Moisture or rain
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95°F (35°C) or less than 41°F (5°C)
  - High humidity
- Do not place electronic equipment near your computer. The electromagnetic field of the equipment may cause the computer to malfunction.
- Use your computer on a solid, stable surface.
- Do not place your computer near materials such as curtains or draperies that may block its air vents.

- When holding your computer, be sure to wait until it cools down. The back of your computer may be extremely hot around the air exhaust vent (1).



! The appearance of your computer and the location of the ports may be different from those illustrated above due to variations in specifications. It may also vary in some countries or areas.

- Your computer uses high-frequency radio signals and may cause interference to radio or TV reception. If this occurs, relocate the computer a suitable distance away from the set.
- Use only specified peripheral equipment and interface cables. Otherwise, problems may occur.
- Do not use cut or damaged connection cables.
- If your computer is brought directly from a cold location to a warm one, moisture may condense inside the computer. In this case, allow at least one hour before turning on the computer. If any problems occur, unplug the computer and contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information** **(page 193)**.
- Make sure you disconnect the power cord before cleaning your computer.

- To avoid losing data when your computer is damaged, back up your data regularly.
- Do not grasp the base stand to lift your computer as the stand may break and cause the main unit to fall, resulting in damage to the computer or personal injuries.
- To lift or move your computer, grasp the bottom corners of the main unit with both hands from behind the computer to avoid any damage to the LCD screen. There is a risk of scratching the LCD screen, for example with your waist belt buckle, if you hold your computer from its front.

Handling the Built-in MOTION EYE Camera

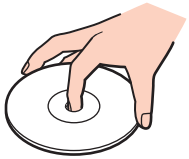
- Do not touch the lens protection cover of the built-in **MOTION EYE** camera, as it may cause scratches on the cover and such scratches will appear on the captured images.
- Do not let the direct sunlight get into the lens of the built-in **MOTION EYE** camera regardless of your computer's power state, as it may cause the camera to malfunction.
- The built-in **MOTION EYE** camera is disabled while videos or still images are imported from an i.LINK-compatible device connected to the i.LINK port.
- Clean the lens protection cover of the built-in **MOTION EYE** camera with a blower brush or a soft brush. If the cover is extremely dirty, wipe it off with a soft dry cloth. Do not rub the cover, as it is sensitive to pressure.

Handling Floppy Disks

- Do not open the shutter manually and touch the internal components of the floppy disk.
- Keep floppy disks away from magnets.
- Keep floppy disks away from direct sunlight and other sources of heat.
- Keep floppy disks away from any liquid. Do not let them get wet. When you are not using your floppy disk, always remove it from the floppy disk drive and put it in a storage case.
- If the floppy disk comes with a label, make sure that the label is properly affixed. If the edge of the label is curled up, the label may stick to the inside of the floppy disk drive and cause a malfunction or damage your floppy disk.

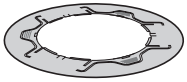
Handling Discs

- Do not touch the surface of the disc.
- Fingerprints and dust on the surface of a disc may cause read errors. Always hold the disc by its edges and central hole, as shown below:



- Proper care of the disc is essential to its continuous reliability. Do not use solvents (such as benzine, thinner, alcohol, commercially available cleaners, or anti-static spray) which may cause damage to the disc.
- For normal cleaning, hold the disc by its edges and use a soft cloth to wipe the surface from the center out.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.
- Never affix an adhesive label to a disc. This will affect the use of the disc and may result in an irreparable problem.

- An 8 cm disc adapter exclusively designed for your model is provided for use of 8 cm discs on your computer.



  - Be sure to attach the adapter to an 8 cm disc before using it on your computer. Not using the supplied adapter or using a similar kind of the adapter with the disc may cause a disc recognition error or result in a stuck disc, a damaged disc, or a malfunction of your computer.
  - Remove the adapter from an 8 cm disc when not using the disc. Keeping the adapter attached may deform the disc.
  - Do not leave the adapter in a place subject to high temperatures to avoid deformation. Use of the deformed adapter with an 8 cm disc may cause a disc recognition error or result in a stuck disc, a damaged disc, or a malfunction of your computer.
  - Not all types of the 8 cm disc can fit into the adapter.

Using Headphones

Preventing hearing damage – Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

Handling the Memory Stick

- Do not touch the Memory Stick connector with your finger or metallic objects.
- Use only the adhesive label supplied with the Memory Stick as a label.
- Do not bend, drop, or expose the Memory Stick.
- Do not disassemble or modify the Memory Stick.
- Do not let the Memory Stick get wet.
- Do not use or store the Memory Stick in a location subject to:
  - Static electricity
  - Electrical noise
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity
  - Corrosive substances
- Use the storage case supplied with the Memory Stick.
- Be sure to make a backup copy of your valuable data.
- Keep the Memory Stick and the Memory Stick adaptors out of reach of children. There is a risk of swallowing them.
- When using the Memory Stick Duo, do not use a fine-tipped pen to write on the label adhered to the Memory Stick Duo. Exerting pressure on the media may damage internal components.

Handling the Hard Disk

The hard disk drive has a high storage density and reads or writes data in a short time. However, it can be easily damaged by mechanical vibration, shock, or dust.

Although the hard disk drive has the internal safety device to prevent losing data due to mechanical vibration, shock or dust, you should be careful when handling your computer.

To avoid damaging your hard disk drive

- Do not subject your computer to sudden movements.
- Keep your computer away from magnets.
- Do not place your computer in a location subject to mechanical vibration or in an unstable position.
- Do not move your computer while the power is on.
- Do not turn off the power or restart your computer while reading or writing data to the hard disk drive.
- Do not use your computer in a place subject to extreme changes in temperature.

If the hard disk drive is damaged, the data cannot be restored.

Updating Your Computer

Be sure to install the latest updates on your computer with the following software applications so that the computer can run more efficiently.

- **Windows Update**
  Click **Start**, **All Programs**, and **Windows Update** and then follow the on-screen instructions.
- **VAIO Update 4**
  Click **Start**, **All Programs**, **VAIO Update 4**, and **VAIO Update Options** and then follow the on-screen instructions.

  !
  Your computer must be connected to the Internet before you can receive updates.

Troubleshooting

This section describes how to solve common problems you might encounter when using your VAIO computer. Many problems have simple solutions. Try these suggestions before visiting the Sony online support web site at the following URLs:
http://esupport.sony.com/EN/VAIO/ for customers in USA
http://www.sony.ca/support/ for customers in Canada
http://esupport.sony.com/ES/VAIO/ for customers in Spanish-speaking Latin American countries or areas
http://esupport.sony.com/ES/VAIO/BR/ for customers in Brazil

- **Computer (page 154)**
- **System Security (page 160)**
- **Built-in MOTION EYE Camera (page 161)**
- **Networking (page 164)**
- **Bluetooth Technology (page 167)**
- **Optical Discs (page 171)**
- **Display (page 176)**
- **Printing (page 177)**
- **Microphone (page 178)**
- **Mouse (page 179)**
- **Speakers (page 180)**
- **Touch Pad (page 182)**
- **Keyboard (page 183)**
- **Floppy Disks (page 184)**

❑ **Audio/Video** (page 185)
❑ **HDMI** (page 188)
❑ **Memory Stick** (page 190)
❑ **Peripherals** (page 191)

Computer

What should I do if my computer does not start?

- Make sure your computer is securely plugged into a power source and turned on and the power indicator light shows the power is on.
- Make sure the floppy disk drive (if applicable) is empty.
- If your computer is plugged into a power strip or an uninterruptible power supply (UPS), make sure the power strip or UPS is plugged into a power source and turned on.
- If the orange **DISPLAY OFF** indicator is lit, press the **DISPLAY OFF** button.
- Make sure the brightness and contrast controls are adjusted correctly.
- Make sure the computer input is selected. To change the display input, press the **HDMI SELECT** button on the right of the computer.
- Unplug the power cord. Wait three to five minutes. Plug the power cord again and press the power button to turn on your computer.
- Condensation may cause your computer to malfunction. If this occurs, do not use the computer for at least one hour.
- Remove any extra memory modules you may have installed since purchase.
- Check that you are using the supplied Sony power cord. For your safety, use only the genuine Sony power cord, which is supplied by Sony for your VAIO computer.
- Make sure your computer is not in Sleep mode by pressing the power button on the computer or the sleep button on the wireless keyboard or the remote commander. If you press and hold the power button for more than four seconds, your computer will turn off automatically.

What should I do if the green power indicator light turns on but my screen remains blank?

- If the orange **DISPLAY OFF** indicator is lit, press the **DISPLAY OFF** button.
- Make sure the computer input is selected. To change the display input, press the **HDMI SELECT** button on the right of the computer.
- Press the **Alt**+**F4** keys several times to close the application window. An application error may have been occurred.
- Press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Restart**.
- Press and hold the power button for more than four seconds to shut down your computer. Unplug the power cord and leave the computer for about five minutes. Then, plug the power cord and turn on the computer again.

!
Make sure that the batteries of your wireless keyboard and remote commander are properly installed and not worn out.

Turning off your computer with the power button or the **Ctrl**+**Alt**+**Delete** keys may cause loss of unsaved data.

What should I do if my computer or software stops responding?

- If your computer stops responding while a software application is running, press the **Alt**+**F4** keys to close the application window.
- If the **Alt**+**F4** keys do not work, click **Start**, the arrow next to the **Lock** button, and **Shut Down** to turn off your computer.
- If your computer does not turn off, press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Shut Down**.
  If the **Windows Security** window appears, click **Shut Down**.

  !
  Turning off your computer with the **Ctrl**+**Alt**+**Delete** keys or the power button may cause loss of unsaved data.
- If your computer still does not turn off, press and hold the power button until the computer turns off.
- Remove the power cord.
- Try reinstalling the software.
- Contact the software publisher or designated provider for technical support.

Why doesn't my computer enter Sleep mode?

Your computer may become unstable if the operating mode is changed before the computer completely enters Sleep mode.

To restore your computer to normal mode

1. Close all open programs.
2. Click **Start**, the arrow next to the **Lock** button, and **Restart**.
3. If your computer does not restart, press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Restart**.
4. If this procedure does not work, press and hold the power button until the computer turns off.

!
Turning off your computer with the power button may cause loss of unsaved data.

What should I do if Windows does not start and a message appears, when I start my computer?

If you enter a wrong power-on password three times consecutively, the **Enter Onetime Password** message appears and Windows will not start. Press and hold the power button for more than four seconds to check that the power indicator light turns off. Wait for 10 or 15 seconds, then restart your computer and enter the correct password. When entering the password, check that the Num lock and Caps lock indicators are unlit. If both or either of the lights is lit, press the **Num Lk** (or **Num Lock**) key or the **Caps Lock** key to turn off the indicator before entering the password.

What should I do if my game software does not work or it keeps crashing?

- Check the web site of the game if there are any patches or updates to download.
- Make sure you have installed the latest video driver.
- On some VAIO models, the graphics memory is shared with the system. The optimal graphic performance in this case is not guaranteed.

What should I do if I cannot remember the power-on password?

If you have forgotten the power-on password, contact an authorized Sony Service Center to reset it. A reset fee will be charged. To find the nearest center or agent, see **Sony Support Information** **(page 193)**.

How can I change the boot device order?

You can use one of the BIOS functions to change the boot device order. Follow these steps:

1. Turn on your computer.
2. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer and press the **F2** key several times when the VAIO logo appears.
3. Press the ← or → key to select **Boot**.
4. Press the ↑ or ↓ key to select your desired priority under **Boot Priority** and press the **Enter** key.
5. Press the ↑ or ↓ key to select the device to which you want to assign the priority and press the **Enter** key.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

Why doesn't my screen turn off after the automatic turn-off time has passed?

The **VAIO Original Screen Saver** disables the timer setting, which you can select using the Windows power options, for your screen to turn off.
Select a screen saver other than the **VAIO Original Screen Saver**.

What should I do if I cannot boot my computer from the USB floppy disk drive connected to the computer?

To boot your computer from the USB floppy disk drive, you need to change the boot device.

Turn on your computer and press the **F11** key when the VAIO logo appears.

How do I check the volume of the recovery partition?

Your built-in storage device* contains the recovery partition where data for the system recovery is stored. To check the volume of the recovery partition, follow these steps:

* See the online specifications to find out about your storage device configuration.

1 Click **Start**, right-click **Computer**, and select **Manage**.

2 Click **Disk Management** under **Storage** on the left pane.
The volume of the recovery partition and the total volume of the C drive are displayed in the **Disk 0** row on the center pane.

System Security

How can I protect my computer against security threats, such as viruses?

The Microsoft Windows operating system is preinstalled on your computer. The best way to protect your computer against security threats, such as viruses, is to download and install the latest Windows updates regularly.

You can get important Windows updates by doing the following:

! Your computer must be connected to the Internet before you can receive updates.

1. Connect to the Internet.
2. Double-click the **Windows Security Alerts** icon on the taskbar.
3. Follow the on-screen instructions to set up automatic or scheduled updates.

How do I keep my antivirus software updated?

You can keep the **Microsoft Windows Live OneCare** software program current with the latest updates from Microsoft Corporation.

To download and install the latest security updates, follow these steps:

! Your computer must be connected to the Internet before you can receive updates.

1. Click **Start**, **All Programs**, and **Windows Live OneCare**.
2. Click **Check for Updates** in the **Protection Plus** section.
3. The **Windows Live OneCare Updates** balloon appears on the taskbar.
4. Follow the on-screen instructions to download updates.

Built-in MOTION EYE Camera

Why does the viewer window show no images or poor-quality images?

- The built-in **MOTION EYE** camera cannot be shared by more than one software application. If another software application is using the camera, exit the application before using the built-in **MOTION EYE** camera.
- The video memory of your computer may be insufficient for displaying images from the built-in **MOTION EYE** camera. Lowering the resolution or reducing the colors of the LCD screen might help.
- The viewer window may show some noise, for example horizontal streaks, if you view a rapid-moving object. This is normal and does not indicate a malfunction.
- If the problem persists, restart your computer.

Why are captured images poor in quality?

- The images captured under the fluorescent light may show reflections of light.
- A dark portion in captured images may appear as a noise.
- If the lens protection cover is dirty, you cannot take a clear shot. Clean the cover. See **Handling the Built-in MOTION EYE Camera** **(page 144)**.

Why do captured images contain dropped frames and audio interruptions?

- The effect settings on your software application may cause dropped frames. See the help file included with your software application for more information.
- There may be more software applications running than your computer can handle. Exit the applications that you are not currently using.
- The power management function of your computer may be active. Check the CPU performance.

Why do the images captured by the built-in MOTION EYE camera flicker?

This problem occurs when you use the camera under fluorescent lights due to the mismatch between lighting output frequency and shutter speed.
To reduce flicker noise, change the direction of the camera or the brightness of camera images. In some software applications, you can set an appropriate value to one of the camera properties (e.g. light source, flicker, etc.) to eliminate flicker noise.

Why is the video input from the built-in MOTION EYE camera suspended for a few seconds?

The video input may be suspended for a few seconds if:

- a shortcut key with the **Fn** key is used.
- the CPU load increases.

This is normal and does not indicate a malfunction.

Why can't I use the built-in MOTION EYE camera?

- The built-in **MOTION EYE** camera cannot be shared by more than one software application. If another software application is using the camera, exit the application before using the built-in **MOTION EYE** camera.
- If the problem persists, you must reinstall the driver software for the camera. Follow these steps:
  1. Click **Start**, **Control Panel**, **Hardware and Sound**, and **Device Manager**.
  2. Double-click **Imaging devices**.
  3. Right-click the device name for your camera and click **Update Driver Software**.

What should I do if my computer becomes unstable when it enters a power saving mode while the built-in MOTION EYE camera is in use?

- Do not place your computer into Sleep mode while you are using the built-in **MOTION EYE** camera.
- If your computer automatically enters Sleep mode, change the corresponding power saving mode setting. To change the setting, see **Using the Power Saving Mode** **(page 121)**.

Networking

What should I do if my computer cannot connect to a wireless LAN access point?

- Connection capability is affected by distance and obstructions. You need to place your computer away from obstructions or move any access point you may be using closer to the computer.
- Make sure the **WIRELESS** switch is on and the **WIRELESS** indicator light is lit on your computer.
- Make sure power to the access point is on.
- Follow these steps to check the settings:
  1. Click **Start** and **Control Panel**.
  2. Click **View network status and tasks** under **Network and Internet**.
  3. Click **Connect to a network** to confirm that your access point is selected.
- Make sure the encryption key is correct.

What should I do if I cannot access the Internet?

- Check the access point settings. See the manual that came with your access point for more information.
- Make sure your computer and the access point are connected to one another.
- Place your computer away from obstacles or move any access point you may be using closer to the computer.
- Make sure your computer is properly configured for Internet access.

Why is the data transfer speed slow?

- The wireless LAN data transfer speed is affected by distance and obstructions between devices and access points. Other factors include device configurations, radio conditions, and software compatibility. To maximize the data transfer speed, place your computer away from obstacles or move any access point you may be using closer to the computer.
- If you are using a wireless LAN access point, the device may be temporarily overloaded depending on how many other devices are communicating via the access point.
- If your access point interferes with other access points, change the access point channel. See the manual that came with your access point for more information.

How do I avoid data transfer interruptions?

- When your computer is connected to an access point, data transfer interruptions may occur if a large file is exchanged or the computer is placed in close proximity to microwaves and cordless telephones.
- Move your computer closer to the access point.
- Make sure the access point connection is intact.
- Change the access point channel. See the manual that came with your access point for more information.

What are channels?

- Wireless LAN communication uses divided frequency bands known as channels. Third-party wireless LAN access point channels may be preset to different channels from Sony devices.
- If you are using a wireless LAN access point, see connectivity information contained in the manual that came with your access point.

Why does the network connection stop when I change the encryption key?

Two computers with the wireless LAN function may lose a peer-to-peer network connection if the encryption key is changed. You can either change the encryption key back to the original profile or re-enter the key on both computers so the key matches.

Bluetooth Technology

What should I do if other Bluetooth devices cannot find my computer?

- Make sure both devices have the Bluetooth function enabled.
- If the **WIRELESS** indicator light is unlit, turn on the **WIRELESS** switch.
- Your computer and the device may be too far apart. Wireless Bluetooth technology works best when the devices are within 33 feet (10 meters) of each other.

Why can't my computer find other Bluetooth devices?

If the connected device is also connected to other devices, it may not appear in the **Bluetooth Devices** window or you may not be able to communicate with the device.

What should I do if I cannot find the Bluetooth device I want to communicate with?

- Check that the Bluetooth function of the device you want to communicate with is on. See the other device's manual for more information.
- If the device you want to communicate with is already communicating with another Bluetooth device, it may not be found or it may not be able to communicate with your computer.
- To allow other Bluetooth devices to communicate with your computer, follow these steps:

  1 Click **Start**, **Control Panel**, **Hardware and Sound**, **Bluetooth Devices**, and **Bluetooth Settings**.

  2 Click the **Options** tab and select the **Allow Bluetooth devices to find this computer** check box.

What should I do if other Bluetooth devices cannot connect to my computer?

- Make sure the other devices are authenticated.
- To allow other Bluetooth devices to communicate with your computer, follow these steps:
  1. Click **Start**, **Control Panel**, **Hardware and Sound**, **Bluetooth Devices**, and **Bluetooth Settings**.
  2. Click the **Options** tab and select the **Allow Bluetooth devices to find this computer** check box.
- The data transfer distance can be shorter than 33 feet (10 meters) depending on existing obstacles between the two devices, on radio wave quality, and on the operating system or the software in use. Move your computer and Bluetooth devices closer to each other.
- If the device you want to communicate with is already communicating with another Bluetooth device, it may not be found or it may not be able to communicate with your computer.
- Check that the Bluetooth function of the device you want to communicate with is on. See the other device's manual for more information.

Why is my Bluetooth connection slow?

- The data transfer speed depends on the obstructions and/or the distance between the two devices, on the radio wave quality, and on the operating system or the software in use. Move Bluetooth devices closer to your computer.
- The 2.4 GHz radio frequency used by Bluetooth and wireless LAN devices is also used by other devices. Bluetooth devices incorporate technology that minimizes interference from other devices using the same wavelength, however, communication speed and connection range may be reduced. Interference from other devices may also stop communications altogether.
- Connection capability is affected by distance and obstructions. You need to place your computer away from obstacles or move the device to which it is connected closer to the computer.
- Identify and remove obstacles between your computer and the device to which it is connected.
- Note that large files may occasionally be corrupted during continuous transfer due to limitations of the Bluetooth standard and electromagnetic interference in the environment.

What should I do if my computer becomes unstable when I use a Bluetooth audio device?

Your computer may become unstable if you change a sound output device to a Bluetooth audio device while audio or video playback software is running.

When you listen to playback audio from your Bluetooth audio device, connect the Bluetooth audio device to the computer first and then launch your audio or video playback software.
See the help file for detailed information on connecting the Bluetooth audio device.

Why can't I use the services supported by the connected Bluetooth device?

Connection is only possible for services also supported by the computer with the Bluetooth function. For more details, search for Bluetooth information using **Windows Help and Support**. To open **Windows Help and Support**, click **Start** and **Help and Support**.

Why can't I use the Bluetooth function when I log onto my computer as a user with a standard user account?

The Bluetooth function may not be available to a user with a standard user account on your computer. Log onto the computer as a user with administrative rights.

Why can't I connect to a Bluetooth device through a Personal Area Network (PAN)?

If the device to which you want to connect does not support Bluetooth communication in Personal Area Network User (PANU) mode, you cannot connect to the device through a PAN.

Why can't I use the Bluetooth devices when I switch users?

If you switch users without logging off your system, the Bluetooth devices will not work. Be sure to log off before switching users. To log off your system, click **Start**, the arrow next to the **Lock** button, and **Log Off**.

Why can't I exchange business card data with a mobile phone?

The business card exchange function is not supported.

Optical Discs

Why does my computer freeze when I try to read a disc?

The disc that your computer is trying to read may be dirty or damaged. Follow these steps:

1. Press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Restart** to restart the computer.
2. Remove the disc from the optical disc drive.
3. Check the disc for dirt or damage. If you need to clean the disc, see **Handling Discs** **(page 146)** for instructions.

What should I do if the disc does not slide out?

- Make sure your computer is on.
- Press the drive eject button on the computer or the disc drive eject button on the wireless keyboard.
- If either button does not work, click **Start** and **Computer**, right-click the optical disc drive icon, and select **Eject**.
- Try restarting your computer.

What should I do if I cannot play a disc properly on my computer?

- Make sure the disc is inserted into the optical disc drive with the label side facing toward you.
- Make sure the necessary program(s) is installed according to the manufacturer's instructions.
- If a disc is dirty or damaged, your computer will stop responding. Follow these steps:
  1. Press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Restart** to restart the computer.
  2. Remove the disc from the optical disc drive.
  3. Check the disc for dirt or damage. If you need to clean the disc, see **Handling Discs** **(page 146)** for instructions.
- If you are playing a disc and cannot hear sound, do any of the following:
  - The muting button on the wireless keyboard or the remote commander may have been pressed. Press the button once again.
  - The volume may have been turned off with the volume down button on the wireless keyboard or the remote commander. Press the volume up button to turn up the volume loud enough to hear sound.
  - Right-click the volume icon on the taskbar and click **Open Volume Mixer** to check the settings.
  - Check the volume setting in the audio mixer.
  - If you are using external speakers, check the volume settings on the speakers and the connections between the speakers and your computer.
  - Make sure the correct driver software is installed. Follow these steps:

  1. Click **Start** and **Control Panel**.
  2. Click **System and Maintenance**.
  3. Click **System**.

4 Click **Device Manager** on the left pane.
The **Device Manager** window appears with a listing of your computer's hardware devices.
If an "X" or an exclamation point appears on the listed device, you may need to enable the device or reinstall the drivers.

5 Double-click the optical disc drive device to open a list of the optical disc drives of your computer.

6 Double-click the desired drive.
You can confirm the driver software by selecting the **Driver** tab, and clicking **Driver Details**.

7 Click **OK** to close the window.

- Make sure an adhesive label is not affixed to a disc. Adhesive labels can come off while the disc is in the optical disc drive and damage the drive or cause it to malfunction.
- If a region code warning appears, the disc may be incompatible with the optical disc drive. Check the package to make sure the region code is compatible with the optical disc drive.
- If you notice condensation on your computer, do not use the computer for at least one hour. Condensation can cause the computer to malfunction.

What should I do if I cannot play Blu-ray Disc media?

!
This Q & A entry applies to selected models only. See the online specifications to find out the type of your optical disc drive, and then **Reading and Writing Optical Discs** (page 49) to find out about the supported disc media.

You may not be able to play some Blu-ray Disc contents on your computer. To play such contents, download and install the latest updates for **WinDVD BD** using **VAIO Update**.
To download and install the updates on the computer, it must be connected to the Internet. For information on how to connect the computer to the Internet, see **Using the Internet** (page 95).

What should I do if I cannot write data to CD media?

- Make sure you neither launch any software application nor allow any to launch automatically, not even a screen saver.
- Stop using the keyboard.
- If you are using a CD-R/RW disc with an adhesive label affixed, replace it with one with no affixed adhesive label. Using a disc with an affixed adhesive label could cause a write error or other damage.

What should I do if I cannot write data to DVD media?

- Make sure you are using the correct DVD recordable media.
- Check which DVD recordable format is compatible with your optical disc drive. Note the possibility that some brands of DVD recordable media do not work.

Why can't I write data to Blu-ray Disc media?

!
This Q & A entry applies to selected models only. See the online specifications to find out the type of your optical disc drive, and then **Reading and Writing Optical Discs** **(page 49)** to find out about the supported disc media.

- Make sure your optical disc drive supports the Blu-ray Disc writing function. The DVD±RW/±R DL/RAM drive does not support it.
- BD-R Disc media are not rewritable. You cannot add or erase data to or from the BD-R Disc media.

Display

Why did my screen go blank?

- Your computer screen may go blank if the computer enters Sleep mode. If the computer is in Sleep mode, press any key to bring the computer back into Normal mode. See **Using the Power Saving Mode** **(page 121)** for more information.
- Make sure the computer input is selected. To change the display input, press the **HDMI SELECT** button on the right of the computer.
- Make sure your computer is securely plugged into a power source and turned on and the power indicator light is lit.
- The LCD backlight of your computer may have been turned off. Press the **DISPLAY OFF** button.

What should I do if my screen is dark?

Press the **Fn**+**F6** keys to brighten your computer screen.

How do I run Windows Aero?

! This Q & A entry applies to selected models only.

To run Windows Aero, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Customize colors** under **Appearance and Personalization**.
3. Click **Open classic appearance properties for more color options**.
4. Select **Windows Aero** from the **Color scheme** options on the **Appearance** tab.
5. Click **OK**.

For information about the Windows Aero features, such as Windows Flip 3D, see **Windows Help and Support**.

Printing

What should I do if I cannot print a document?

- Make sure your printer is on, and the printer cable is securely connected to the ports on the printer and your computer.
- Make sure your printer is compatible with the Windows operating system installed on your computer.
- You may need to install the printer driver software before you use your printer. See the manual that came with your printer for more information.
- If your printer is not functioning after your computer resumes from Sleep mode, then restart the computer.
- If the bidirectional communication functions are provided with your printer, disabling the functions on your computer may enable printing. Follow these steps:

  1 Click **Start** and **Control Panel**.

  2 Click **Printer** under **Hardware and Sound**.

  3 Right-click the printer icon and select **Properties**.

  4 Click the **Ports** tab.

  5 Click to cancel the **Enable bidirectional support** check box.

  6 Click **OK**.

  This disables the bidirectional communication functions of the printer, such as data transfer, status monitoring, and remote panel.

Microphone

What should I do if my microphone does not work?

- If you are using an external microphone, make sure the microphone is turned on and is properly plugged into the microphone jack on your computer.
- Your sound input device may have been incorrectly configured. To configure the sound input device, follow these steps:
  1. Close all open programs.
  2. Click **Start** and **Control Panel**.
  3. Click **Hardware and Sound**.
  4. Click **Manage audio devices** under **Sound**.
  5. On the **Recording** tab, select the desired device for sound input and click **Set Default**.

How can I prevent microphone feedback?

Microphone feedback occurs when the microphone receives the sound from a sound output device, such as a speaker.

To prevent this problem:

- Keep the microphone away from a sound output device.
- Turn down the volume of the speakers and the microphone.

Mouse

What should I do if my computer does not recognize my mouse?

- Make sure the power switch on the bottom of the wireless mouse is in the **ON** position.
- Make sure another mouse is not connected.
- Make sure the supplied AA batteries are properly installed.
- Press the **CONNECT** button on your computer and then on the wireless mouse within 10 seconds to re-establish the connection between the two devices.

What should I do if the pointer does not move when I use my mouse?

- Make sure another mouse is not connected.
- If the pointer does not move while a software application is running, press the **Alt**+**F4** keys to close the application window.
- If the **Alt**+**F4** keys do not work, press the Windows key once and then the ➡ key several times, select **Restart** with the ⬆ or ⬇ key, and press the **Enter** key to restart your computer.
- If your computer does not restart, press the **Ctrl**+**Alt**+**Delete** keys, select the arrow next to the **Shut down** button with the ⬇ and ➡ keys and then **Restart** with the ⬆ or ⬇ key, and press the **Enter** key to restart your computer.
- If this procedure does not work, press and hold the power button until the computer turns off.

  !
  Turning off your computer with the power button may cause loss of unsaved data.
- Avoid using any wireless devices that exchange radio signals on the 2.4 GHz frequency band near your wireless mouse. These devices may cause interference, causing your mouse to stop working properly.
- Do not place metal furniture near your computer or wireless mouse, as this may create interference, causing your mouse to stop working properly.

Speakers

What should I do if my external speakers do not work?

- If you are using a program that has its own volume control, make sure the volume control is properly set. See the program's help file for more information.
- Make sure your speakers are properly connected and the volume is turned up loud enough to hear sound.
- Make sure your speakers are designed for computer use.
- If your speakers have a muting button, set the button to off.
- The muting button on the wireless keyboard or the remote commander may have been pressed. Press the button once again.
- The volume may have been turned off with the volume down button on the wireless keyboard or the remote commander. Press the volume up button to turn up the volume loud enough to hear sound.
- If your speakers require external power, make sure the speakers are connected to a power source. See the manual that came with your speakers for more information.
- Check the Windows volume controls by clicking the volume icon on the taskbar.
- Your sound output device may have been incorrectly configured. To configure the sound output device, see **How do I change the sound output device? (page 186)**.

What should I do if I do not hear sound from the built-in speakers?

- If you are using a program that has its own volume control, make sure the volume control is properly set. See the program's help file for more information.
- The muting button on the wireless keyboard or the remote commander may have been pressed. Press the button once again.
- The volume may have been turned off with the volume down button on the wireless keyboard or the remote commander. Press the volume up button to turn up the volume loud enough to hear sound.
- Check the Windows volume controls by clicking the volume icon on the taskbar.
- Your sound output device may have been incorrectly configured. To change the sound output device, see **How do I change the sound output device? (page 186)**.

Touch Pad

What should I do if the touch pad does not work?

- You may have disabled the touch pad. Press the **Fn**+**F11** keys to enable the touch pad.
- If the pointer does not move while a software application is running, press the **Alt**+**F4** keys to close the application window.
- If the **Alt**+**F4** keys do not work, press the Windows key once and then the ➡ key several times, select **Restart** with the ⬆ or ⬇ key, and press the **Enter** key to restart your computer.
- If your computer does not restart, press the **Ctrl**+**Alt**+**Delete** keys, select the arrow next to the **Shut down** button with the ⬇ and ➡ keys and then **Restart** with the ⬆ or ⬇ key, and press the **Enter** key to restart your computer.
- If this procedure does not work, press and hold the power button until the computer turns off.

!
Turning off your computer with the power button may cause loss of unsaved data.

Keyboard

What should I do if the keyboard configuration is wrong?

The language layout of your wireless keyboard is labeled on the packaging box. If you choose a different regional keyboard when you complete the Windows setup, the key configuration will be mismatched.
To change the keyboard configuration, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Clock, Language, and Region**, and click **Regional and Language Options**.
3. Change the settings as desired.

What should I do if I cannot enter certain characters with the keyboard?

- If you cannot enter **U**, **I**, **O**, **P**, **J**, **K**, **L**, **M**, and so on, the **Num Lk** key may be activated. Check that the Num lock indicator light is unlit. If the Num lock indicator is lit, press the **Num Lk** key to turn it off before entering these characters.
- Avoid using any wireless devices that exchange radio signals on the 2.4 GHz frequency band near the wireless keyboard. These devices may cause interference, causing the keyboard to stop working properly.
- Do not place metal furniture or objects near your computer or wireless keyboard, as this may create interference, causing the keyboard to stop working properly.

What should I do if my computer does not recognize my keyboard?

- Make sure the power switch on the back of the wireless keyboard is in the **ON** position.
- Make sure the supplied AA batteries are properly installed.
- Press the **CONNECT** button on your computer and then on the wireless keyboard to re-establish the connection between the two devices.

Floppy Disks

Why doesn't the Safely Remove Hardware icon appear on the taskbar when the drive is connected?

Your computer does not recognize the floppy disk drive. First, make sure the USB cable is properly connected to the USB port. If you need to secure the connection, wait a few moments for the computer to recognize the drive. If the icon still does not appear, follow these steps:

1. Close all programs that are accessing the floppy disk drive.
2. Wait for the indicator light on the floppy disk drive to turn off.
3. Push the eject button to remove the disk, and disconnect the USB floppy disk drive from your computer.
4. Reconnect the floppy disk drive by plugging the USB cable into the USB port.
5. Restart the computer by clicking **Start**, the arrow next to the **Lock** button, and **Restart**.

What should I do if I cannot write data to a floppy disk?

- Make sure the floppy disk is properly inserted in the drive.
- If the disk is inserted properly and you are still unable to write data to it, the disk may be full or write-protected. You can either use a floppy disk that is not write-protected or disable the write-protect feature.

Audio/Video

What should I do if I cannot use my DV camcorder?

If a message appears stating that the i.LINK device is disconnected or turned off, the i.LINK cable may not be securely plugged into the port on your computer or camcorder. Unplug the cable, and plug it in once again. See **Connecting an i.LINK Device** **(page 110)** for more information.

i.LINK is a trademark of Sony Corporation used only to designate that a product contains an IEEE 1394 connection. The procedure to establish an i.LINK connection may vary, depending on a software application, an operating system, and a compatible i.LINK device. Not all products with an i.LINK connection can communicate with each other. See the manual that came with your compatible i.LINK device for more information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

How do I turn off the Windows startup sound?

To turn off the Windows startup sound, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Hardware and Sound**.
3. Click **Manage audio devices** under **Sound**.
4. On the **Sounds** tab, click to cancel the **Play Windows Startup sound** check box.
5. Click **OK**.

How do I change the sound output device?

If you do not hear sound from the device connected to the **OPTICAL OUT** port, you need to change the device for sound output.

1. Close all open programs.
2. Click **Start** and **Control Panel**.
3. Click **Hardware and Sound**.
4. Click **Manage audio devices** under **Sound**.
5. On the **Playback** tab, select the desired device for sound output and click **Set Default**.

What should I do if I do not hear the sound from the device connected to the OPTICAL OUT port?

Once you have connected a device to the **OPTICAL OUT** port, you need to change the device for sound output if you want to hear sound from the device. For the detailed procedure, see **How do I change the sound output device?** **(page 186)**.

How do I output the Dolby Digital or DTS sound through an S/PDIF-compatible device?

To output the Dolby Digital or DTS sound from a disc through an S/PDIF-compatible device connected to your computer, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Hardware and Sound**.
3. Click **Manage audio devices** under **Sound**.
4. On the **Playback** tab, select the optical out icon and click **Properties**.
5. Click the **Supported Formats** tab.
6. Click to select the **DTS Audio** and **Dolby Digital** check boxes.
7. Click **OK**.

!
If the Dolby Digital or DTS output is connected to a device that does not support it, the device will not play any sound. In such a case, cancel the **DTS Audio** and **Dolby Digital** check boxes.

HDMI

! This Q & A entries apply to models with an **HDMI INPUT** port only. See the online specifications to find out whether your computer is equipped with the **HDMI INPUT** port.

What should I do if I cannot change the volume with the Up/Down buttons?

You cannot change the volume with the Up/Down buttons while the computer input is selected. Use the volume control buttons on the wireless keyboard or the remote commander instead.

✍ The **HDMI SELECT** button and the **HDMI SELECT** indicator light illuminate in green when the HDMI input is selected.

What should I do if I cannot change the volume or the brightness with the wireless keyboard or the remote commander?

You cannot change the volume or the brightness with the wireless keyboard or the remote commander while the HDMI input is selected. Use the Up/Down buttons to change the volume or the OSD menu to change the brightness.

✍ The **HDMI SELECT** button and the **HDMI SELECT** indicator light illuminate in green when the HDMI input is selected.

How do I display the Windows desktop?

To display the Windows desktop, make sure your computer is turned on, and then press the **HDMI SELECT** button on the right of the computer to switch the display input to the computer input. If your computer screen remains blank, see **What should I do if the green power indicator light turns on but my screen remains blank? (page 155)**.

How do I save input images or sound from the connected HDMI-compatible device to files on my computer?

You cannot save such images or sound to files on your computer. In addition, you cannot record the HDMI input, such as a TV program, displayed on your computer or control the Windows Media Center with the HDMI Input function.

How do I turn off the Sony logo lamp while viewing the HDMI input?

You need to change the settings with the OSD menu to turn off the Sony logo lamp. See **Changing the Display and Sound Settings for the HDMI Input** **(page 79)** for more information.

Memory Stick

What should I do if I cannot use Memory Stick formatted on a VAIO computer on other devices?

You may need to reformat your Memory Stick.

Formatting Memory Stick erases all data, including music data previously saved on it. Before you reformat Memory Stick, back up important data and confirm that the media does not contain files you want to keep.

1 Copy the data from the Memory Stick onto your hard disk drive to save data or images.

2 Format the Memory Stick by following the steps in **To format a Memory Stick** **(page 90)**.

Why can't I save music files onto my Memory Stick?

Copyright protected music can only be checked out to Memory Stick with the MagicGate logo.

!
Use of recorded music requires permission from the copyright holders.

Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital camera using Memory Stick?

Yes, and you can view video clips that you have recorded with Memory Stick-compatible digital cameras.

Why can't I write data to Memory Stick?

Some versions of Memory Stick are equipped with an erasure prevention switch to protect data from accidental erasure or overwriting. Make sure the erasure prevention switch is off.

Peripherals

What should I do if I cannot connect a USB device?

- If applicable, check the USB device is turned on and using its own power supply. For example, if you are using a digital camera, check if the battery is charged. If you are using a printer, check if the power cable is connected properly to the AC outlet.
- Try using another USB port on your computer. The driver could be installed to the specific port you used the first time you connected the device.
- See the manual that came with your USB device for more information. You may need to install software before you connect the device.
- Try connecting a simple, low-powered device such as a mouse to test if the port is working at all.
- USB hubs may prevent a device from working because of a power distribution failure. We recommend you connect the device directly to your computer without a hub.

Support Options

This section contains information on where to go for answers to questions about your VAIO computer and the preinstalled software.

❑ **Sony Support Information (page 193)**
❑ **Program Support Information (page 196)**

Sony Support Information

See the following sources for answers in the sequence listed below.

1 VAIO Computer Documentation

This on-screen **User Guide** (this manual) and the printed **Welcome mat** provide information on how to maximize your computer's capabilities and solve common problems.

2 Program Guides and Help Files

The preinstalled programs on your computer may be supplied with individual help guides. These guides are stored on the hard disk drive as on-screen help files. You can find the help files from the help menu for the specific program.

3 Operating System Online Support

Your computer comes preinstalled with a Microsoft Windows operating system. For operating system support, you can visit Microsoft customer support at: http://support.microsoft.com/directory/.

4 Sony Computing Support

This service provides instant access to information on commonly encountered problems. Type a description of the problem and the Knowledge Database searches for the corresponding solutions online.
You can visit the Sony online support web site at the following URLs:
http://esupport.sony.com/EN/VAIO/ for customers in USA
http://www.sony.ca/support/ for customers in Canada
http://esupport.sony.com/ES/VAIO/ for customers in Spanish-speaking Latin American countries or areas
http://esupport.sony.com/ES/VAIO/BR/ for customers in Brazil

5 VAIO Update

When your computer is connected to the Internet, **VAIO Update** automatically notifies you when critical software and security information is posted on the support web site. Click the **VAIO Update** notice to open the VAIO Support web site and view the information.

For customers in Latin American countries or areas

Customer Information Center

If you do not find the information you are looking for at our site, you may call Sony directly. In order to receive the fastest and most efficient services, have the following information readily available:

1. Your VAIO computer model

   You can find it at the lower right corner of the display on the notebook, and in the same place on the front panel of the CPU on the desktop.

2. Your computer's serial number

   You can find it on the back or bottom of the notebook or on the back of the desktop. The serial number is the last 7 digits of the number below the barcode.

3. The operating system on your computer
4. The hardware component or the software program that is causing the problem
5. A brief description of the problem

In order to contact a Sony technical support representative, call the following numbers:

❑ In Argentina:

(011) 6770-SONY (7669)

❑ In Mexico:

In Mexico City: 5002-9819

In the Mexican Republic: 01-800-759-7669

❑ In Colombia:

01-800-550-7000

❑ In Peru:

0-801-1-7000 or 511-6100

❑ In Chile:

800-261-800

From mobile phones: 02-754-6333

❑ In Venezuela:

0-800-1-SONY-00 (0-800-1-7669-00)

❑ In Panama:

800-2050

❑ In Brazil:

(11) 3677-1080

Program Support Information

Depending on the computer model and particular configuration you purchased, your computer may not include all of the software programs listed below.

Contacts for Sony software products are listed below:

- For customers in USA
  Web site http://esupport.sony.com/EN/VAIO/
  Telephone 888-4-SONY-PC (888-476-6972)
- For customers in Canada
  Web site http://www.sony.ca/support/
  Telephone 877-899-SONY (877-899-7669)
- For customers in Spanish-speaking Latin American countries or areas
  Web site http://esupport.sony.com/ES/VAIO/
- For customers in Brazil
  Web site http://esupport.sony.com/ES/VAIO/BR/

For contacts about third-party software products, see the following.

Adobe® Photoshop® Elements, Premiere® Elements, Acrobat® Reader®

Adobe Systems Inc.

- For customers in USA and Canada
  Web site http://www.adobe.com/support
  Telephone 800-685-3652

America Online® (Dial-Up)

America Online, Inc.

- For customers in USA and Canada
  Web site http://www.aol.com

AOL® BlueString™

America Online, Inc.

- For customers in USA and Canada
  Web site http://www.aol.com

AOL® Instant Messenger™

America Online, Inc.

- For customers in USA and Canada
  Web site http://www.aim.com

AOL® Toolbar

America Online, Inc.

- For customers in USA and Canada
  Web site http://help.aol.com/help

Click to Disc

Sony Electronics Inc.

At the touch of a button, Click to Disc allows you to automatically burn DVDs from a digital video (DV) device. Create DVDs by capturing video contents straight from a DV device or by importing video from stored files — and you can also edit the video. Create DVD photo albums and slide shows with picture files or by importing pictures from a digital still camera. You can give a professional look to your DVDs by adding chapter menus, backgrounds, and menu screens. You are only a few clicks away from creating your own DVDs!
For contacts about the software, see **Program Support Information** **(page 196)**.

eBay®

eBay Inc.

❑ For customers in USA and Canada
Web site http://pages.ebay.com/help/index.html

Magic-i™ Visual Effects

ArcSoft, Inc.

A smart and simple webcam application designed to enhance users' video chat experience through frames, effects, and themes.

❑ For customers in USA and Canada
Web site http://www.arcsoft.com/support/

Microsoft® Internet Explorer, Movie Maker, Media Player, Works

Microsoft Corp.

- For customers in USA and Canada
  Web site http://support.microsoft.com

Microsoft® Office Basic Edition, Office Professional Edition, Office Small Business Edition, Office Ready

Microsoft Corp.

- For customers in USA and Canada
  Web site http://support.microsoft.com

Microsoft® Office Professional 2007 60-Day Trial Version

!
This trial software will work only for 60 days after you first use it. You will not be able to use the software if you do not activate it as described the first time you use the software. You can activate the software by Internet: Internet service charges may apply. If you want to keep using the software after the 60-day trial period, you must convert to the perpetual version. You can convert online by following the conversion instructions presented during setup and paying the required fees.

Microsoft Corp.

- For customers in USA and Canada
  Web site http://support.microsoft.com

60-Day Trial Version of Microsoft® Office

!
The Microsoft Office 60-Day Trial software included with this computer system is intended for evaluation purposes only. The software has been installed and you must activate the software before you can use it. Product activation procedures will be detailed during initial launch of the software; activation requires Internet access. This software has an expiration date of 60 days from the date of first use, at which time the software will operate under reduced-functionality mode, limiting end-user options and operations.

Microsoft Corp.

❑ For customers in USA and Canada
Web site http://support.microsoft.com

Microsoft® Windows Live™ OneCare™ Trial Version

!
This trial software will work for ninety (90) days after you first use it. You will not be able to use the software if you do not activate it as described the first time you use the software. You can activate the software by Internet: Internet service charges may apply. If you want to keep using the software after the 90-day trial period, you must buy a subscription. You can subscribe online by following the conversion instructions presented during setup and paying the required fees.

Microsoft Corp.

OneCare helps keep your PC safe and secure while making your life easier.

❑ For customers in USA and Canada
Web site http://support.microsoft.com

14-Day Trial Version of Napster®

Napster, Inc.

- For customers in USA and Canada
  Web site http://www.napster.com

Protector Suite QL

UPEC, Inc.

Protector Suite QL allows you to easily setup your fingerprint sensor equipped on your computer. Protector Suite QL supports fingerprint logon, fast user switching, file encryption, registering forms and more.

- For customers in USA and Canada
  Web site http://www.upek.com/

QuickBooks® Simple Start

Intuit Inc.

- For customers in USA and Canada
  Web site http://www.intuit.com/support/

Quicken® 2008 Deluxe

Intuit Inc.

- For customers in USA and Canada
  Web site http://www.intuit.com/support/

Roxio® Easy Media Creator® 10 Suite

Sonic Solutions

- For customers in USA and Canada
  Web site http://support.sonic.com/

SmartWi™ Connection Utility

Sony Electronics Inc.

SmartWi Connection Utility allows you to easily switch between the various wireless components (wireless LAN, wireless WAN, and Bluetooth® technology connectivity) that came with your computer.
For contacts about the software, see **Program Support Information** **(page 196)**.

SonicStage™ Mastering Studio

Sony Electronics Inc.

Use SonicStage Mastering Studio to record songs from analog records or cassette tapes into your computer and output them to CDs, DVDs, or audio files in WAV format.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Control Center

Sony Electronics Inc.

VAIO Control Center provides a centralized location that gathers resources to configure your VAIO computer and view your computer's configuration and specifications.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Edit Component

Sony Electronics Inc.

VAIO Edit Component provides enhanced editing functionality when using Adobe® Premiere® Pro or Adobe Premiere Elements on your VAIO computer.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Hardware Diagnostic

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Launcher

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO Media™ plus

Sony Electronics Inc.

VAIO Media plus brings multimedia to your network, enabling you to share music, video, and still image files between your VAIO® computers. You can set up one or more VAIO computers as "media servers," which store your multimedia files and make them available to other compatible VAIO computers on your wired or wireless network.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Movie Story

Sony Electronics Inc.

Bringing pictures and video to life with this simple-to-use application.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® MusicBox

Sony Electronics Inc.

Select and play songs that are automatically categorized into moods.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Update 4

Sony Electronics Inc.

VAIO Update helps you keep your VAIO® computer up to date by regularly checking the Sony online support web site for important software updates and information for your specific VAIO computer model.
For contacts about the software, see **Program Support Information** **(page 196)**.

VAIO® Video & Photo Suite

Sony Electronics Inc.

VAIO Content Importer and VAIO Content Exporter are included in this utility software. This software enables you to import and export your media files to or from a DVD, digital still camera, or camcorder.
For contacts about the software, see **Program Support Information** **(page 196)**.

Vegas Movie Studio

Sony Electronics Inc.

Professional video, audio and DVD creation

❑ For customers in USA and Canada
Web site http://www.sonycreativesoftware.com/support/default.asp

WebCam Companion™ 2

ArcSoft, Inc.

❑ For customers in USA and Canada
Web site http://www.arcsoft.com/support/

WinDVD® for VAIO®

InterVideo, Inc.

❑ For customers in USA and Canada
Web site http://www.intervideo.com/jsp/Support.jsp
Telephone 1-800-772-6735

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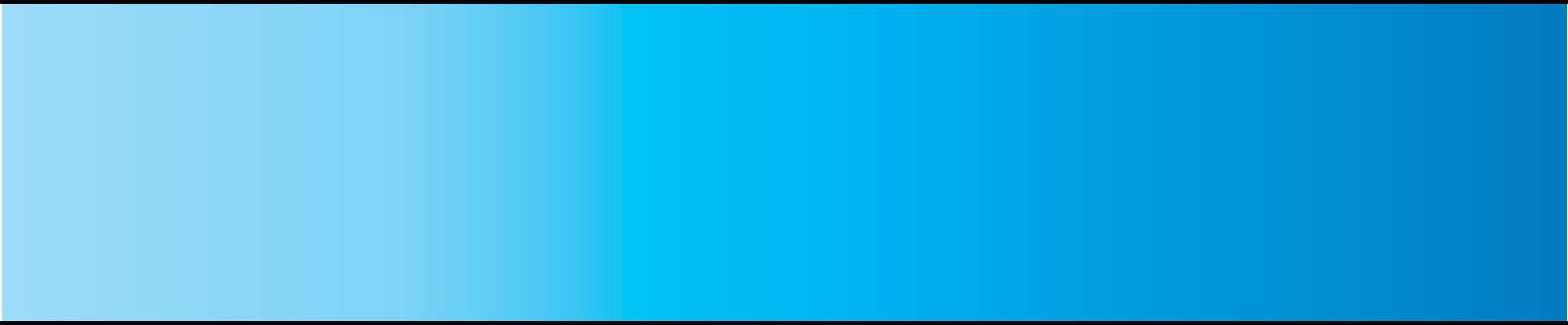
See the online specifications to find out what software is available for your model.



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